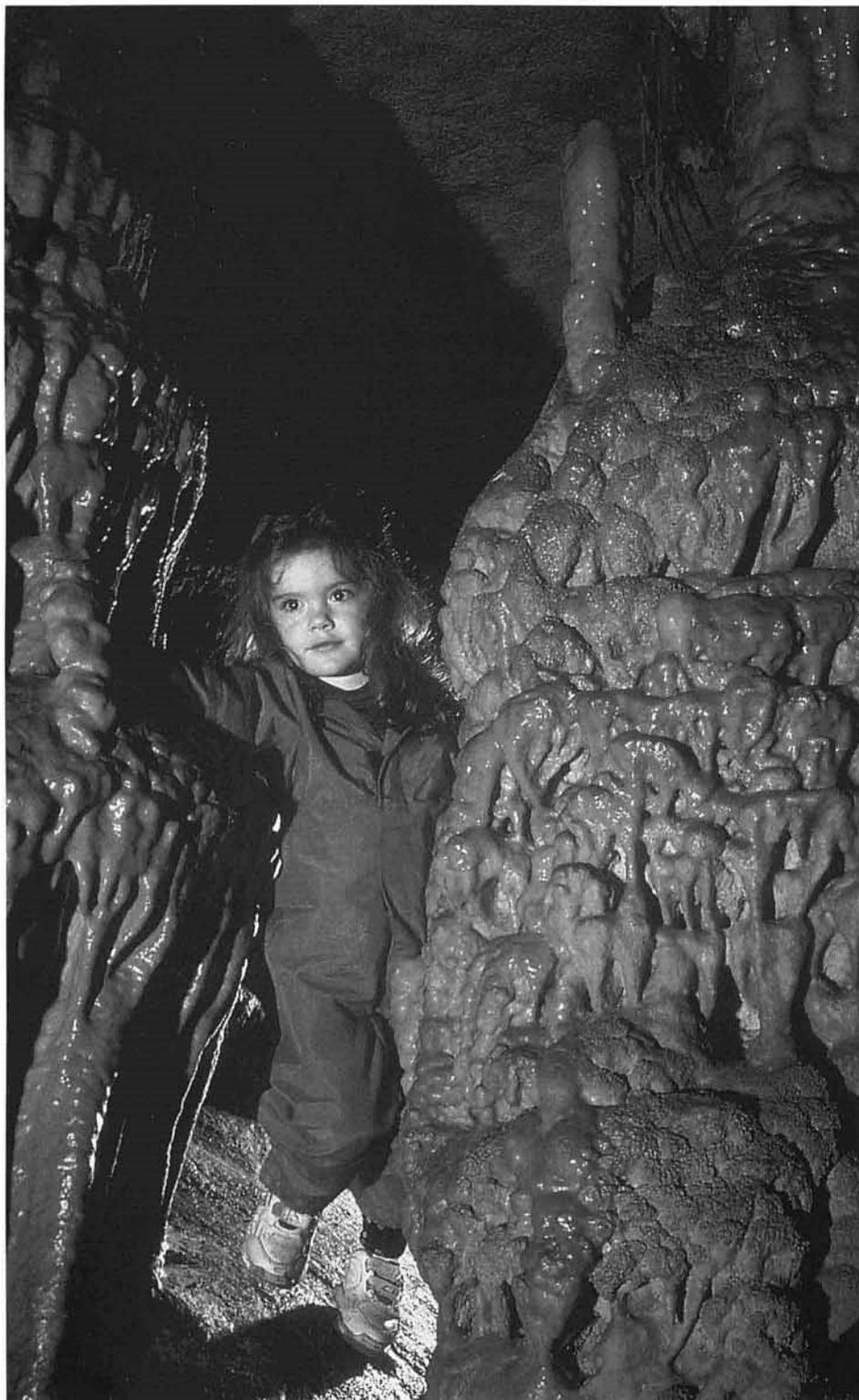


NSS NEWS

NOVEMBER 1997



CALENDAR



"Now Here's a Real Babe" was shown in the 1997 Photo Salon. The original color slide was shot by John Van Swearingen IV.

Send information on coming events to the NSS NEWS, 320 Brook Drive, Boulder Creek, CA 95006; nssnews@caves.org

Further International events can be found on the UIS International Speleo Calendar at: <http://rubens.its.unimelb.edu.au/~pgm/uis/events.html>

U.S.A.

January 31, 1998 - National Cave Rescue Commission (NCRC) Winter Business Meeting, DuBose Conference Center, Monteagle, TN. For more information contact Butch Feldhaus, NCRC National Coordinator, at bfeldhaus@compuserve.com, or (423)238-7009.

February 7, 1998—Quarterly meeting of the Southeastern Cave Conservancy, Inc. at ITT Technical Institute, Birmingham, AL (10:00am CST). Contact Scott Fee (205) 854-PITS or scottfee@usa.pipeline.com or www.scci.org

March 20–22, 1998—Florida Cave Cavort '98. To be located in the Tallahassee area of North Florida. Co-sponsored by the Central Florida Cavers and the Flint River Grotto. Visit some of the areas finest caves and make new friends and renew old friendships. Contact Carl Reiche 531 Ventris Court, Maitland, FL 32751-5562; (407) 644-9444 or e-mail reicheisland@juno.com

July 25 - August 1, 1998 - The National Cave Rescue Commission (NCRC) presents the 1998 Cave Rescue Operations and Management Seminar at the DuBose Conference Center, Monteagle, TN. For more information contact Butch Feldhaus at bfeldhaus@compuserve.com, or (423)238-7009, or Nancy Chrimes, Seminar Registrar, at nrcr@compuserve.com or (540)992-3665

August 3–7, 1998—NSS Convention, Sewanee, Tennessee. Contact: William Shrewsbury, PO Box 4444, Chattanooga, TN 37405-0444; (423) 886-3296; nss98@caves.org

July 12–16, 1999—NSS Convention. Twin Falls County Fairgrounds, Filer, Idaho. Contact: David W. Kesner, PO Box 1334, Boise, ID 83701; (208)939-0979; email drdave@micron.net

INTERNATIONAL

Jan. 31–Feb. 14, 1998—8th International Symposium on Vulcanospeleology with field camps and excursions, Nairobi, Kenya. USA contact: Bruce Randall, 324 Questend Ave., Pittsburgh, PA 15228; (412) 344-0356. (see Feb. '97 NSS News, page 57)

March 6-12, 1998—20th Anniversary of the "Che Guevara" Speleological Group, Matanzas, Cuba. Open to all interested cavers. Caving, camping, seminars. Registration fee of \$100 U.S. includes food, camping, and transport (except airfare). Info: Prof. Pedro Pablo Gonzalez Castro, Sociedad Espeologica de Cuba, Novena No. 8402 esq. 84, Playa CP 11300, Ciudad de la Habana, Cuba Phone: (537) 22-5025, fax: 24-0438 or 24-2985

October 5-10, 1998—"SUBCITY '98" Meeting on Caves of Natural Origin Under Cities & Urban Areas, Budapest (+Aggtelek), Hungary. Contact Nora Fleck, Hungarian Speleological Society, H-1027 Budapest, Fo u. 68. Phone/Fax: (361) 201 9493, E-mail: MKBT@mail.mata.v.hu

Sept. 12–18, 1999—9th International Symposium on Vulcanospeleology of the IUS, Catania, Italy. Contact: Giuseppe M. LICITRA - Centro Speleologico Etneo Via Cagliari, 15, 95127 CATANIA, Italy licitra@mail.asianet.it

NSS EXECUTIVE COMMITTEE

PRESIDENT

Dave Luckins
3683 Oakleaf Drive
West Bloomfield, MI
48324-2545
(248)360-4076
dluckins@caves.org

ADMINISTRATIVE VP

Doug Medville
11762 Indian Ridge Rd.
Reston, VA 20191
medville@patriot.net
(703) 860-0134

OPERATIONS VP

G. Thomas Rea
8677 S State Road 243
Cloverdale IN 46120-9696
(765) 653-4423
trea@tdsnet.com

EXECUTIVE VICE-PRESIDENT

Fred L. Wefer
P.O. Box 47
McDowell, VA 24458
(540) 396-3543
fwefer@mitre.org

SECRETARY/TREASURER

Paul Stevens
5964 Seabright Road
Springfield VA 22152
PLStevens@AOL.com

EDITOR

Dave Bunnell
320 Brook Drive
Boulder Creek, CA 95006
(408) 338-3853
nssnews@caves.org

style and submission guidelines: www.caves.org/~nss/

ADVERTISING ACCOUNTING

Scott Fee
2501 Gable Blvd.
Birmingham, AL 35215
(205)854-PITS (7487)
scottfee@usa.pipeline.com

ADVERTISING SALES

Scott Jex
10975 Wildrose Ct.
Boise, ID 83713
(208)322-3422
FAX (208)322-3430
nss@zanet.com

Advertising info: <http://www.zanet.com/nss>

DEPARTMENT EDITORS

CONSERVATION

David Jagnow
1300 Iris #103
Los Alamos, NM 87544
(505)662-0553 (Tel. & FAX)
djagnow@roadrunner.com

TECHNIQUES & SAFETY

Bill Cuddington
3412 Hutchens Ave. SE,
Huntsville, AL, 35801
(205) 536-2177

DOWN THROUGH THE DECADES

Peri Frantz
16345 Englewood Ave.,
Los Gatos, CA 95032
(408) 356-8506
frantz@netcom.com

VIRTUAL CAVING

Bonnie Crystal
204 E 2nd Ave. #256
San Mateo, CA 94401
(415) 349-9613
BXTAL1@aol.com

IN THE MEDIA

Bill Klimack
6303 Ashley Meadows Court
Dayton, OH 45424
(937) 235-2532
BKlimack@aol.com

TECHNOLOGY

Daniel Hazelton
489 South Van Buren
Kirkwood, MO 63122-4112
(314) 984-9783
s995517@jinx.umsl.edu

NEWSLETTER REVIEW

Bob Springston
17034 Wilson Way,
Watsonville, CA 95076-9136
(408) 728-6505
74634.321@compuserve.com

INTERNATIONAL NEWS

John W. Stembel
RR 2 Box 94
Verbank NY 12585
(914) 677-0344
rocco@mindspring.com

PROOFREADER: E. ROUSSEAU

DIGITAL PREPRESS: DAVE BUNNELL

Deadline: The NSS News is distributed the last week of the month preceding the date of publication. Ads, articles and announcements should be sent to the NSS News, 320 Brook Drive, Boulder Creek, CA 95006 by the 20th of the previous month (e.g., July issue is mailed the last week in June; material should be submitted by May 20).

The NSS News (ISSN-0227-7010) is published monthly with the MEMBERS' MANUAL and AMERICAN CAVING ACCIDENTS published as additional issues by the National Speleological Society, Inc., 2813 Cave Ave, Huntsville, AL 35810-4431; Tel: (205)852-1300; FAX (205)851-9241, e-mail: nss@caves.org, World Wide Web: <http://www.caves.org/~nss/>.

Regular membership in the NSS is \$30 per year. Subscriptions to the NSS News are \$18 per year; individual copies are \$1.50 each. Contact the Huntsville office for membership applications, subscriptions, orders, or for replacement of issues missing or damaged in the mail. Periodicals Postage paid in Huntsville, Alabama, and additional offices.

Copyright ©1997

by the National Speleological Society, Inc.

POSTMASTER:

Send address changes to NSS News, 2813 Cave Ave., Huntsville, AL 35810-4431.

NSS NEWS
AMERICA'S CAVING MAGAZINE

NOVEMBER 1997

VOLUME 55 NUMBER 11

FEATURE ARTICLES

Middle East

Return to the Desert Caves of Saudi Arabia 329
by John Pint

Florida

The Archer Caves 336
by Buford Pruitt, Jr.

1998 NSS Convention Alert - 344
Time to plan ahead

Techniques and Safety

Descending 101 345
by Bill Cuddington

History

The Ranshaws of Covington, Kentucky and Mammoth Cave 346
by Charles J. DeCroix

DEPARTMENTS

Calendar	326	Society News	350
Commentary	328	International News	351
Letters	328	News and Notes	352
Color Gallery	340	Reading	352
B&W Gallery	342	Down Through the Decades	353
In the Media	347	Classified Ads	354

ABOUT THE COVER



"Scaled Up", by Peter and Ann Bosted, won a blue ribbon in the 1997 NSS Photo Salon. It was taken in a cave in New Mexico's Guadalupe Mountains. Model Glen Malliet was captured on Fuji Provia 100 film with a 35 mm Nikon f1.4 lens. Warmth was added by use of a yellow filter on one of the flashes.

The rear cover photos were taken by John Pint in Whistling Tea Pot, beneath the Saudi Arabian desert.

*Top: Mike Gibson on the red sand floor
Left: Dave Black on cable ladder below entrance
Right: Susy Pint pretending to have dug out a pile of sand to access the Closet of the Jinn*



COMMENTARY

VOLUNTEERISM IN THE NSS

In a column titled "Please Don't Volunteer" in the May 1996 NSS NEWS. I briefly discussed the duties common to all committee chair positions in the NSS. I told you the simple truth and gave the column that shocking title so you would read it. Unfortunately a few people had such a negative reaction to the title that they failed to grasp what I said in the column itself, and I certainly took some lumps for my effort. Let me suggest, however, that after you have finished reading this column, go back and reread the other column. Try to ignore the title and think instead about what the column actually says. I think you will see that it contains some useful information and some good advice.

The NSS accomplishes so much that some of its members think the society uses professionals to handle much of the work. It simply isn't so. The work is handled almost entirely by volunteers, and these people are absolutely crucial to the workings of the NSS. Camille and Beth, who run the NSS Office in Huntsville, Alabama, are paid employees; however, all of the work done by committee members, committee chairmen, directors, and officers is voluntary. These jobs require a time commitment from five to thirty hours a week,

depending on exactly which job one is talking about. Much of the work these volunteers do is challenging, some is exciting, but quite frankly, some of it is rather boring.

Given the time commitment required, you might wonder: why in the world would anybody volunteer for any of these jobs? That's a fair question, but I don't think there is a single definitive answer. Some people volunteer because their parents taught them civic duty, and view working for the NSS as a way to express that duty. Most of us feel some debt of gratitude to the NSS for the experiences that organized caving has given us over the years, for example, the instruction and training in caving techniques and the cave trips and expeditions with interesting and talented people. There are also the more direct member services like the annual NSS National Conventions, the monthly NSS NEWS, the JOURNAL OF CAVE AND KARST STUDIES, the NSS MEMBERS MANUAL, AMERICAN CAVING ACCIDENTS, the NSS Bookstore, SPELEO DIGESTS, and so on. It is true that a few of the committee chairmen/editors receive small honoraria, but they could make more money working at the local McDonald's.

If not money, then what do the volunteers get out of their participation? Well, there are some opportunities for national recognition

and awards, but I don't think that is the reason people volunteer. I think the main reason is the good feelings they get from contributing to a worthwhile cause. Volunteers enjoy the sense that they can make good things happen in a good organization. They get to meet new people and learn to work together as a team to achieve common goals. They feel a sense of personal accomplishment. Some folks want to be a part of the family and experience a greater sense of belonging. Most people have skills, sometimes related to their work, that they can apply to the NSS. Some volunteers enjoy learning new skills. And there are, I suppose, people who volunteer for less altruistic reasons, but that's okay as long as the work gets done.

So if you feel, as many of us do, that the NSS is a worthwhile organization with goals that you agree with (or perhaps want to change), then **please do volunteer**. You can do this by responding to position-available announcements in the *Society News* section of the NSS NEWS, or by contacting the current chairman (see your NSS MEMBERS MANUAL) of the committee whose work interests you. Let's all continue to work together to make the NSS an even better organization. The good news is we can have fun doing it.

Fred Wefer

Executive Vice President

LETTERS

CAVE TREK

So far, I've heard nothing but negative comments regarding the new "Cave Trek" cartoon. I like it. It should stay. Even if I didn't like it, there is a bigger consideration: content diversity. Dave Bunnell has done an outstanding, if not inspirational, job in diversifying the content of the NSS NEWS. There are sections of the NSS NEWS that I never read—simply no interest—but I don't write tired old letters of complaint, because someone else in the NSS may enjoy the sections that I don't like. Everyone has differing interests. Dave has tried hard to offer something for everyone. Keep up the excellent work, Dave. If you don't like the "new" way of the NSS NEWS, then you should form your own publication, and call it "Grumpy Cavers."

Kyle Martin

NSS #26911 RL

[Editor's reply: While letters expressing appreciation of the job I'm doing are certainly welcome, I don't tend to run these unless it is part of a more general interest commentary. As a result, the letters section may be skewed

in the direction of complaints. Since I rarely receive complaints about any aspect of the News, any increase in letters on a specific topic is of interest. In the case of Cave Trek, some have expressed their dislike. But others have expressed interest, and it does make up only 1/32 of the magazine. What other magazines do you read cover-to-cover? It would seem pointless to terminate the strip in mid-story, so the strip stays. I'll add that I'm not offended by constructive whining since feedback is important to any editor's attempts to please their readership.]

AUGUST ART GALLERY

Mark Tornblom's caricature on the inside cover of the August issue shows originality, talent, and a fresh new illustration style that I personally like. I hope we will be able to enjoy more of his work in the future. I did have three concerns. NSS is spelled correctly, the Duo is obviously a Duo, he has a four-point suspended helmet, and great looking lug-soled boots. Mark went to such accurate detail on so many points that I wonder why he depicted a four-bar opened leg rack (dangerous), a

Petzl Stop rigged backward (in death mode), and an ascender without a working mechanism. In addition, even though I have stupidly done it, why does the dude have two descenders? Pick, Pick, Pick, Not really, I love the guy, especially, his mustache. I think I was only concerned that someone less knowing might attempt to rig a Petzl Stop this way. Mark, Great Stuff, more more!!

Bruce Smith

NSS #12458F

CONVENTION THANK-YOU

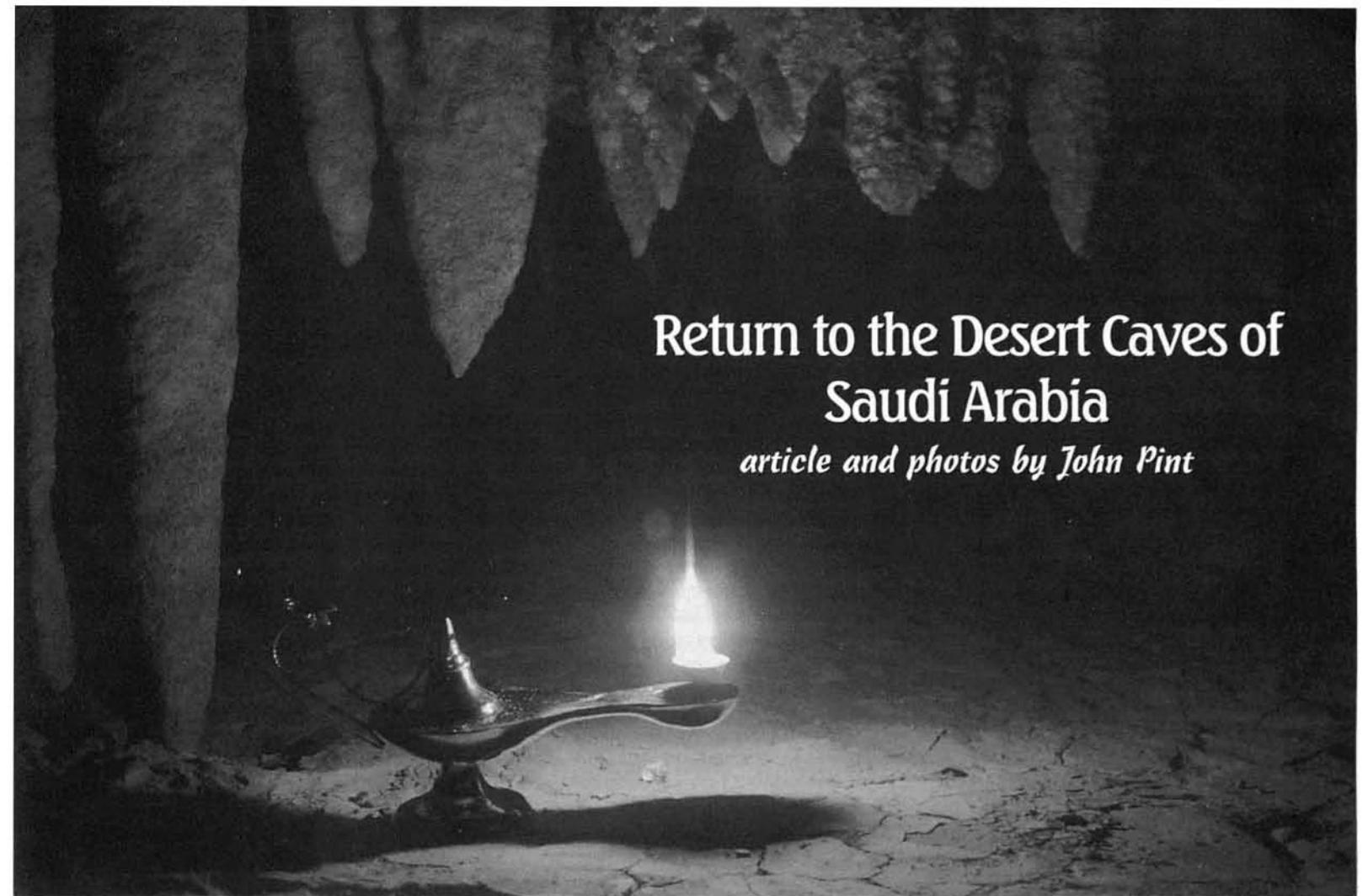
I am just writing to thank everyone who was so helpful in retrieving our camping and caving gear after the great flood at the 1997 convention. It is nice to know that you can count on people, even if you don't know them, to help when needed. We appreciate getting everything back that we did thanks to the unselfishness of other cavers. Thanks, we hope we can return the favor some day.

Bill Vis

NSS #34340

Steve Zeitler

NSS #39898



Return to the Desert Caves of Saudi Arabia

article and photos by John Pint

In 1983, while camping alongside the red sand dunes of Saudi Arabia's Dahna Desert, we came upon a small hole blowing a steady stream of warm, moist air. After chipping away at the basketball-sized opening, we descended into the labyrinthine passages of **Dahl Sultan**¹, which still appears to be the longest and best decorated cave in the Kingdom of Saudi Arabia.

In August of 1994, we returned to Arabia with the intention of fully exploring and mapping Dahl Sultan, whose known passages cover a distance of roughly five kilometers. It was a reasonable plan, but it never included the possibility that we would be irresistibly distracted by new and even more tantalizing discoveries...

A note left on the bulletin board of the American Community Services in Riyadh quickly put us into contact with two NSS members, Dave Canning and Mike Gibson, both of whom were surprised to know there was a large and only partially explored cave smack dab in the desert, only a few hours from the bustling streets of the Kingdom's capital.

Next, I wandered over to a French language school I had heard about, figuring that any reputable gang of French people would certainly include at least one *spéléologue*.

Here I ran into Christophe Delestre, a video expert who had been training in France for a full year to film the famous Berger Cave (which they never got to film because their grant didn't come through).

Finally, our team was completed by Husam Al Madkhali, a Saudi English teacher who had no caving experience, but who was dying to learn, especially after paging through Peter and Ann Bosted's *Caving Calendar* (which he enthusiastically showed to every living soul he knew).

Early one Friday (the Muslim holiday) we headed northeast out of Riyadh in two 4X4's, one a Toyota and the other a Russian-built Lada, hoping we might be lucky enough to relocate our blowhole on the first try, an unlikely proposition since the sand dunes we had previously used as landmarks would surely have shifted. But, if we could reach this spot just once and get a GPS reading on it, we'd no longer have to waste precious time every trip, just trying to find the hole.

Less than two hours from Riyadh, we reached the little town of Rumah on the edge of the Dahna. All we had to do was figure out how to cross its treacherous sands — which consist of extremely long, parallel dunes known as *irqs* or "fingers." At the camel market at the far end of town, Husam picked up an incredible piece of news. Only minutes

from Rumah, a new road had been built, a road stretching straight in the direction of Ma'aqala, a settlement quite close to the cave. Minutes later, we were speeding along a pristine ribbon of asphalt. "We'll be in Ma'aqala in fifteen minutes," exclaimed Dave. Unfortunately, no sooner had these words escaped his lips than he had to screech to a halt. Without warning of any sort, the marvelous highway to Ma'aqala suddenly evaporated.

There we were in the middle of a flat expanse of extremely loose sand, the home of the scorpion, the hairy camel spider and the *dhub*, a spiny-tailed lizard the size of an iguana that only feels comfortable when the temperature tops a hundred degrees. Unfortunately, this spot, like many other parts of the desert, was also favored by swarms of so called "house" flies which particularly savored crawling about on one's eyes, ears, cheeks and lips. These flies were so numerous that we had to cover our mouths with handkerchiefs when speaking to avoid getting a mouthful.

Our maps showed us that there ought to be an Aramco (Arabian-American Oil Company) pipeline road only a few kilometers east of us. So we took a GPS reading at the end of the blacktop and merrily drove off—only to get completely stuck in the sand just



Mike Gibson removing barrel ends placed over the two Whistling Tea Pot entrances (one extremely small) by bedouins; cleaning entrance prevents "sandwiches in the face" hazard

three minutes later. Well, I must admit it was only the "amazing Lada" which got stuck, probably because Christophe was a complete novice at driving on sand, which requires skills not unlike those learned in climates of ice and snow.

After rescuing the Lada on several occasions, we bounced along the rough pipeline road and finally cleared the last *irq* of the Dahna. Here we turned right onto the flat, hard pan of the As-Sulb plateau and drove along the edge of the dunes.

BEDOUIN TEA PARTY

Everything looked familiar and everything looked the same, for kilometer after kilometer. It would take a miracle for us to come upon that little hole purely by chance. But—*alhamdulillah!* as the Muslims say—our wish for a miracle was fulfilled that day. Spotting a bedouin tent in the distance, we sent Christophe and Husam over to talk to them. Christophe was back in a few minutes, telling us that we had just been invited to tea and soon, there we were, seated in the cool shade with several men and two veiled but uninhibited women, laughing and joking thanks to Husam's instant translations (into both English and French). The tent was of faded green canvas, very sparse, with none of the luxurious hangings and trappings of Hollywood movies. We learned that these bedous had no idea where Dahl Sultan was, as they had just come to that place from somewhere far away and in a month would be off again to who-knows-where. Just as we were in the process of saying our

ma'asalaamas (good-byes), a pickup pulled up and a young man in a flowing white robe joined us. He had just stopped by for a visit, but of course we asked him about Dahl Sultan.

"That blowing hole?" he said. "Yes, it's right nearby; I know exactly where it is; I'm the one who guided the son of the Emir of Ma'aqala to that *dahl* and I've even been inside it." This must be one of those coincidences that only happen once in a millennium. Anyhow, off he drove to show us the way... only to stop, after barely a minute, right next to a small opening which was blowing lots of air. "Just thought you'd be interested," commented our guide. Well, I was dumbfounded. Our famous Blowhole was not the only one in the area!

The hole looked deep, so I tied a flashlight to a string and lowered it down the narrow tube and about a meter below the surface, it appeared to open up. I got the flashlight oscillating and it was soon swinging in a wide arc, touching nothing on either side. At about 10m, it came to a rest on a sandy bottom. Prospects for a fine new cave were looking good.

We took the coordinates for this little hole, which was promptly named the Tea Pot, because without that invitation to tea we'd never have found this pit, which the British, of course would call a "pot."

Our guide had claimed Dahl Sultan was "right nearby," but we had to drive 13km to get there. That's how far our search had been off the mark.

FROM VIRGIN TO VIOLATED

At last, I was peering once again down the entrance to Dahl Sultan. It was interesting and maybe alarming to note what had happened to a previously virgin cave over a period of ten years, even though its entrance was unmarked and it was located in the middle of nowhere. The first difference was that the entrance hole was no longer just wide enough to admit an adult of medium build. Someone had worked hard to enlarge it enough for a Santa Claus to fit through. As a result, sand had been trickling in steadily for a decade, raising the floor by well over a meter. We descended our cable ladder, slid down a sandy slope, gingerly passed over a very foul-smelling, "ripe" sheep carcass and entered what had once been a tunnel leading off in two directions. Now it only went to the left. The room that had once been on the right, noted for a large number of hollow "bird's nest" formations covering its walls, was completely sealed up by sand.

The rest of the cave was still accessible, but empty film boxes and many meters of strung-out audio tape told us a sad story about those who had visited the cave over the years. We even found several cracked off stalactites that someone had carried to the entrance room but had apparently forgotten to take out.

To remove any doubts about who these visitors were, they had spray-painted their names in large letters all over several walls.

After exiting Dahl Sultan, I strode over to the Foxhole, a nearby cave with an entrance about four meters around and twelve deep, with a walkable passage below. To my amazement, the Foxhole was nowhere to be seen. This large pit next to which we used to camp had completely filled with sand and disappeared.

How long it will take for Dahl Sultan to go the same way probably depends on whether steps will be taken to either gate it or at least build a low wall around the entrance. If nothing is done, Saudi Arabia's most fascinating cave will soon be just a memory. Considering that this country has very few caves to start with, Dahl Sultan could be considered a national treasure on the way to oblivion.

DOWN THE TUBE

Having ascertained that Dahl Sultan was still there, though considerably worse for wear, and having determined its location by GPS, it was time to get to the bottom of the vigorously blowing Tea Pot.

On our next trip, I navigated, shouting "left!" and "right" with the GPS unit in my hand as Dave Canning roared over sandy hummocks and between towering dunes until "approaching Tea Pot" suddenly appeared on the screen, accompanied by a loud series of beeps. This seemed odd, because not one of us could see any sign of the little barrel end that had covered the hole last we'd seen it.

"Left...left ... steady," I shouted, watching the countdown to "arrival:" 50m, 30m, 10m



Dave Black demonstrating Dave's Autohaul, at the Whistling Tea Pot

and finally exactly 00.0m, whereupon Dave brought us to a complete halt.

We looked left and right and saw no barrel. Then I leaned out my window and looked straight down. I couldn't believe it—the hole was right there outside my door! We all let loose a spontaneous cheer for technology, jumped out and removed the sand-filled barrel end from the hole. "Nobody could possibly have stuffed a dead sheep down *this one*," commented Dave, perhaps a bit prematurely. This brought up the question of whether any of us human beings could actually squeeze through that opening, which turned out to be only fourteen inches wide and, to make matters worse, wasn't straight. We would have to wriggle past a sharp bend in the tube, which was over a meter long, too long to even dream about widening with a chisel.

We attached our cable ladder to the truck and I slipped into the opening. Surprisingly, the kink in the tube caused no problems as gravity helped me past it. But what would it be like trying to get back up?

The cable ladder came to an end nearly a meter above the floor. I jumped off and looked around me. I was amazed. Every other *dahl* I had been in had wildly contorted, highly irregular walls. But those of this well-shaped room, which was nearly circular, were unusually smooth. There was no water in it, however, though there surely had been in the past. Now, only a few black beetles scurried about in the sand, trapped forever in the darkness. At last the beam of my headlamp came upon a triangular opening in the wall, maybe 75 cm high. The cave continued!

THE HOWLING

As I prepared to crawl into the small tunnel leading out of this room, I became aware of a very strange sound coming from wherever this passage led. At first, it was like a soft whistle, rising and falling. What it the world was *that*?

As I moved along the low, narrow passage, which almost seemed coated with whitewash, the weird warble grew stronger until it was a wavering howl that brought visions of graveyards and banshees. Didn't they say that genies—known here as *jinn*s—lived in caves? What lay at the end of the tunnel?

Little did I suspect, as I turned two sharp bends in the unadorned passageway, that at the end of it I would enter one of the most beautiful chambers in the whole country. I turned the last corner and there they were, covering the walls and ceiling: hundreds and hundreds of shimmering, milky-white helictites. This display looked very much like a company of ballerinas, frozen in the midst of an ecstatic dance. To add to the beauty of the scene, the floor of this room was covered with a smooth layer of rich, red Dahna sand which contrasted with the shining formations.

Nothing so elaborate had ever been found in any other Saudi desert cave and I was delighted to point out my find to mountaineer

Dave Black who had squeezed through the entrance hole and found me admiring that wonderful display.

There was, however, still the wailing of the banshee to deal with. We continued on, following the spooky noise until we found a small alcove at the very end of the cave. In its wall was a round hole about six inches wide, through which a strong wind was blowing with enough force to produce the strange sound that reverberated through the passages of the cave. It was a sort of natural whistle! However, while one mystery was solved, a new one was born, for beyond the small hole, the beam of my flashlight revealed an intriguing room. Were the 30m of passages we had found merely extensions of a much bigger cave that lay on the other side of that final wall? Was there any way we could get inside?

THE DESERT-CAVE SELF-EXTRACTOR

Unfortunately, there was no time to dally, for it was getting late and we wanted to recross the treacherous sands of the Dahna while we still had light. However, in our enthusiasm, we had forgotten one small detail: would it be possible for us to squeeze back up and out of the hole we had come in?

I climbed the swaying cable ladder and soon had the upper part of my body inside the wickedly curving tube. My shoulders filled the space entirely and I wondered how Dave Black, who is bigger than I am, had managed to get through it. I continued moving upward until I could see faces up above, peering at me. At that moment, I discovered a major drawback to cable ladders. If you are in a tight enough spot, there is no way you can lift your foot to take another step!

This was a very frustrating experience, being able to see the outside world, yet unable to reach it. Sheepishly, I grinned at Husam and, with some difficulty, raised one arm above my head. "Can you pull me out?" Instantly, several strong bedouin arms were thrust into the hole—along with a few kilos of sand—and I was lifted straight up into the air, coughing and sputtering, but free.

Dave Black was extracted in the same undignified but well-appreciated manner. Wiping the sand from his eyes, he suggested that next time we could rig a system of pulleys, by which each climber could extract him or herself, without the need for outside help.

Thus was born "Dave's Autohaul" and it proved to be a true blessing on our further visits to the cave when no bedouins could be found in the area, our friends having picked up their tent and moved on. Here's how this desert-cave self-extractor works:

First, you drive your vehicle right up to the edge of the hole. So far, this has been possible for just about every pit we've found in Arabia. Now, from the highest point on the back of your truck, you use webbing and carabiners



Susy Pint peering down the entrance of Kleenex Cave, one of many that we had hoped (in vain) would connect with the Tea Pot

to create a two-to-one advantage (or better) pulley system. Both ends of this system are left inside the tube into which you plan to disappear. On your way back out, all you have to do is wriggle your way up far enough to clip the "weight" end to your harness. Then, your only problem is to get one arm above your head (in the Tea Pot, that's the best you can do). Finally, pull on the other end and up you go.

On this occasion, we surveyed the cave with Mike Gibson, who also produced an unforgettable video on the Tea Pot, the Autohaul and desert caving in sand storms. Since our map of this cave got lost somewhere between Arabia and Mexico, the video is even more valuable as a documentary.

SAND SUMP

Now we were calling the cave The Whistling Tea Pot and thinking about how to get past that wall separating us from The Closet of the Jinn. On our last visit to this fascinating place, we decided to try a dig. Christophe Delestre and I would be the excavators while my wife Susy—a Mexican—would carry tools and messages from our outside support man, David Canning, who had obviously grown so fond of Saudi *kapsa* (a mountain of spiced rice often topped with a whole sheep) that not even a liberal coating of Slick 50 could slip him through that little entrance hole. Since most communications got translated in and out of French, English and Spanish several times along the way, Dave on the surface was sometimes more in



Dahl Murubbeh entrance. Local boys use the cave as a clubhouse.

the dark than the rest of us underground.

Perhaps if we had had some experience in escaping from prisons, we might have known how to dig a proper hole under a wall. We soon discovered you couldn't just go straight down one side and come up the other. The human body simply doesn't bend that sharply, even though we did our best to get Christophe through just such a siphon-like tube. Eventually we accepted the fact that we would have to dig a "bath tub" on our side of the wall, big enough to hold the trunk of a person in a prone position. This meant a whole lot more digging — all by hand, since there was no room for a shovel— and consequently swallowing copious amounts of the sand which was now fiercely blowing through the new hole we had made.

Eventually, all three of us wriggled our way under the wall and into the Closet of the Jinn. The walls of this little room were covered with flowstone of various colors and strangely contorted formations. It was a great place for a Jinn to hang out, but apparently he wasn't home that day. We did find, though, what may have been his lunch: the head and backbone of a small lamb with flesh still on the bones, and smelling none too nice. Knowing no animal could have reached this room the way we had come, we realized that one of the many small passages leading out of the Closet must reach the surface. In fact, one such hole proved to be the source of the airflow moving through the whole cave, but, like the all the others, was too small for a person to fit through. Where all this air comes from we never learned, but a large cave system may still lie waiting to be discovered somewhere beyond the mysterious Closet of the Jinn.

BATHUNT

There's a small cave located within the city limits of Riyadh whose floor is covered with a thick layer of very old, very dry guano, its bat colony having departed long ago. Curiosity as to whether Saudi's desert bats were faring better than their city cousins prompted our group to try locating another bat cave, discovered by Dave Peters and a group of Austrian geologists some time in the late 1980's. All I knew was that it lay some five km southeast of Dahl Sultan. So, I asked GPS Wizard Dave Canning if he thought he could find it.

"Humph!" was his only reply, but a pained look betrayed injured pride. A week later, we were back in the desert, peeking over the edge of a collapse about 15m wide. "Looks like a good place for bats, doesn't it?" said Dave with a triumphant smile.

TOSTADAS AND BONES

Picking our way down the steeply sloping breakdown, we found ourselves in a large room 50m across. Sunlight streaming from the entrance showed us patches of picturesque red sand beyond a field of broken rocks. The far wall immediately attracted our attention. "It's like a giant *tostada* floating in the air," shouted Susy. What she had found appeared to be a thin, lacy layer of gypsum that had separated itself from the wall ages ago. It really did appear to be suspended there and, of course, it was extremely fragile. This Tostada Curtain covered many square meters of cave walls.

By now, Dave and Carol Canning were well into a side passage from which we could hear shouts of "lots of bones" and "Austrian tape." As for the bones, there were at least three collections of them and no way to tell

how deep the deposits might go. They looked like camel bones to us, but no one could imagine how or why a whole herd of camels could have or would have negotiated two very long and steep climb-downs (one in complete darkness) as well as the narrow passage leading out of the big room. Without a doubt, an archaeologist could have a field day reconstructing what actually transpired in this place and when.

Videotape, similar to that left in Dahl Sultan, possibly by those Austrian geologists, stretched off into the darkness, reinforcing our belief that this might indeed be Bat Cave. But where were the bats?

FROSTED FEATHERS

Once again, I heard shouts up ahead. "Incredible! Extraordinaire!" exclaimed Christophe, while Dave Canning's voice echoed from a small passage on the right: "John, you've got to see this."

Moving forward, I found more walls covered by the gypsum "tostada facade," while in other places, thin wafers of this stuff, maybe 10 cm around, were perpendicularly "glued" to the wall or ceiling, that is, sticking straight out from it. How they got themselves into such a position, I could not imagine.

Christophe and Susy's "incredible" find left all of us gasping. The low ceiling was covered with hundreds of aragonite crystals which resembled feathers dipped in frost. They were only six cms at the longest, but the heaped up breakdown permitted us to get as close as we wished.

None of us had ever seen crystals like these before and all our attention was focused on the nine square meters or so of ceiling where this curious crop of "feathers" had grown.

CAVERS IN WHITE ROBES

Then we noticed the fireflies. At least, that's what they looked like at first: three or four tiny pinpoints of light bobbing around far down the passageway. But after a moment or two the fireflies turned into candles and we could hear the voices of their owners.

Never having encountered anyone but ourselves in a Saudi cave before, we were a bit apprehensive. What was this approaching party after? Would they look upon us as intruders?

As the candle-lit figures drew near, we saw the happy faces of several laughing and joking teenagers dressed in long white *thobes* and sandals. These boys appeared delighted rather than annoyed by our presence in "their" cave, and we soon learned they were from the nearby community of Shawia. This cave, a perpetually cool respite from the outrageous heat of summer as well as the cold winds and sandstorms of winter, was their favorite weekend hangout. They called it *Murubbeh*, or "The Square Place" according to British explorer Andy Thompson, who did an excellent job as translator.

While the Saudi "cavers" enjoyed themselves posing for pictures with the (unveiled!) ladies in our gang, Christophe and I finally made our way over to the side passage Dave Canning had been raving about.

HYPNOTIC SPARKLES

You shine your light into this tunnel and you're immediately dazzled by the sparkling reflections of light. Both ceiling and floor are made of what seems like gypsum flowstone and stalactites with plenty of thin "tortilla chips" glued on. We carefully maneuvered our way through the delicate ceiling appendages, but every footstep we took sounded like an elephant tiptoeing through a bin of broken champagne glasses. At the end of the short passage, Dave invited us to enter two little rooms the size of telephone booths.

Standing up in one of these Starlight Chambers is like finding yourself inside a geode. A universe of twinkling lights are reflected from your headlamp: 360 degrees of mesmerizing, tantalizing sparkles that make you feel you've been beamed to another dimension.

WOMEN BEHIND THE SCENES

The fragile beauty of Murubbeh Cave reinforced our worries about the future of Saudi Arabia's Dahna Desert Caves. The two decorated caves we had discovered, Sultan and Whistling TeaPot had tiny entrances requiring vertical gear and agility. Murubbeh, instead, had an inviting, walk-in entrance and a large room with natural lighting. How many visitors would it take until the "wrong person" came along with a hammer in one hand and a gunny sack in the other?

Keeping quiet about our discoveries might have benefitted the blowhole caves, but we felt that Murubbeh needed protection, so we put together a slide show and began our search for a government entity that might be willing to start a Cave Conservation project for Saudi Arabia.

I was busy teaching English every day, so Susy started making phone calls and was soon giving presentations to various women's groups. She was assured that women — though they wear the veil and are forbidden to drive— nevertheless wield considerable influence in Arabia, but behind the scenes. Within days, we had an appointment with Hesham Elabd of the Riyadh Development Authority who saw our slides and immediately declared, "I would like to see this cave. When can we go?"

CELSIUS 45.1

At this time of the year, temperatures were over 45° C (112° F) and you could fry out in the desert if you ever had an accident. However, we easily found two more carloads of volunteers for a camping/caving trip and a week later, there we were, following Hesham's

GPS ... well, not exactly back to Murubbeh Cave, but very close. Close, however, isn't good enough when there's nothing in sight *anywhere* to use as a landmark. So, as the sun began to set, the three vehicles in our expedition were frantically driving around in circles trying to find —but not fall into— a hole 15m wide. The orientational skills of Dave Canning (who wasn't along this time) were fully vindicated.

Finally, the sun slipped below the horizon. We had hoped to spend the evening studying and surveying the cave, but it now looked like we'd be camping just anywhere... so near and yet so far... when suddenly we saw a distant set of headlights blinking in the darkness. One of the cars had found it!

So, a combination of satellite technology and good luck allowed us to camp next to Murubbeh's entrance, which, in turn, put us in the right spot at the right time to observe the bats of Bat Cave streaming into the sky. Those clever little creatures were using an unimpressive hole on a side of the collapse that had appeared to lead nowhere. Now we found that the unpretentious opening led to a whole new section of the cave we had never seen before.

Showing off the cave to new visitors brought to light so many details we ourselves hadn't spotted earlier, that suddenly it was 10:00 PM and we hadn't surveyed an inch. Susy and I decided we would at least start the job and made our way to the far end of The Camel Aisle. However, after only two stations, we had to give it up. "I'm freezing," claimed Susy, which prompted me to consult my handy Campmor keychain thermometer. 65° F is what it said.

"What?" cried the people outside when I told them why we'd abandoned the survey, "it's nowhere near that cold in there. Besides..."

"Yes, I know," I replied, "Saudi caves are *always* a nice warm 26° C (78° F) all year 'round... but this one is *cold*. Maybe that's because it's twice as deep as the other caves around here."

That night, Susy and I set up our tent on the sandy floor of the Clubhouse, the big room that the local boys used

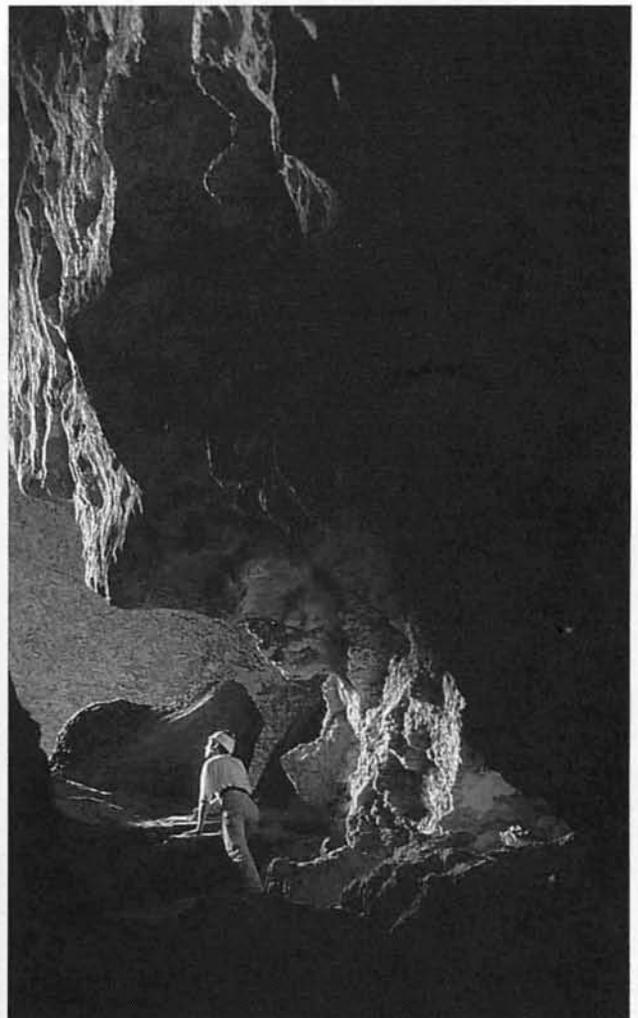
to play cards and such. The very fact that we needed to use our sleeping bags convinced me that my little thermometer had been correct.

THE ELUSIVE CAMEL SPIDER

Suddenly, in the middle of the night, my eyes popped open. Something was wrong, but I didn't know what. I had heard a few passing bats and even the wings of an owl without fully awakening, but now there was something else. And then I saw it, a faint beam of reflected light barely visible through the door mesh. It was a car's headlights, I decided, but the night was dead quiet, so they had to belong to one of our own... After a few moments, the lights went out and I drifted back to sleep.

The next morning, over a hearty breakfast, we heard the story of The Great Camel Spider Walkabout.

Three members of our party, whom I will discretely call X, Y and Z, had found it too warm to sleep (and for some strange reason, hadn't wanted to spend the night in the nice, cool cave). At midnight, these three decided to go off for a little walk. By this time there was no light coming from our campsite, so they made it a point to keep in mind which way was back. However, in the course of their wanderings, they came upon a camel spider,



**Christophe Delestre at
sunlit entrance to the
Camel Aisle, Dahl
Murrubbeh**

a big, hairy creature noted for its ugliness. Fascinated, the trio ran this way and that, wherever the wee beastie led them, until finally it disappeared down a hole. Then, of course, came the moment of reckoning: "I say, does anyone recall which way we came from?" No one had a clue.

X suggested the "great circle" technique. The other two should stay put while he would walk in a wide circle, communicating with occasional flashes of light. "I'm bound to come near the camp sooner or later," said X.

Y, however, the more he thought about it, was convinced that a certain distant glow corresponded to the correct direction of the camp. "We'll save lots of time if you just walk towards the glow," he told X.

So, X set off for the glow, but after an hour and no sight of camp, headed back towards his occasionally blinking companions. "So much for that theory. Now let's try my idea."

The circular approach turned up the camp's location fairly quickly, but when the midnight hikers finally collapsed on their cots, it was 4:00 AM, just a few minutes after someone had finally noticed their absence and had flashed his headlights, the reflection of which had awoken my Inner Watchman, down inside the cave.

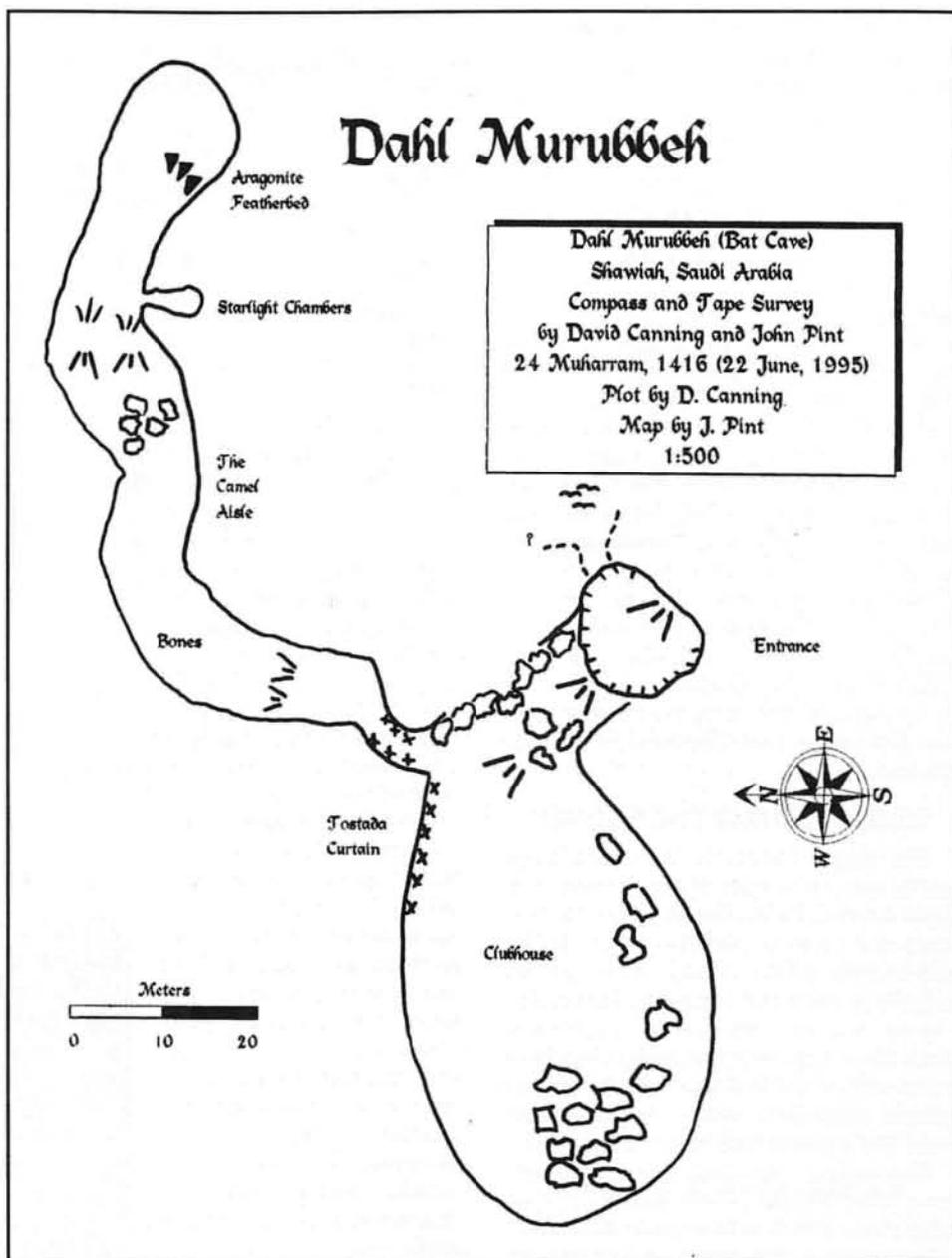
"MAJNOON" IN JUNE

Susy's contacts eventually led her to two outstanding women who arranged for us to be interviewed on a children's TV show as well as a popular program on environmental issues. The children were so enthusiastic and had so many questions on caves, conservation and bats, that four shows were filmed instead of just one. A month later, "Children's Choice" was pleading the cause of Saudi Cave Conservation on nationwide TV practically every day and we had high hopes that all the hullabaloo would catch the eye of some VIP who would like to see the Desert Caves preserved for future generations.

As a matter of fact, word did reach a staff member of the Ministry of Petroleum and Mineral Resources who pointed out that they indeed were the ones responsible for such things as caves in the desert. So why not set up a trip so he could have a look at them?

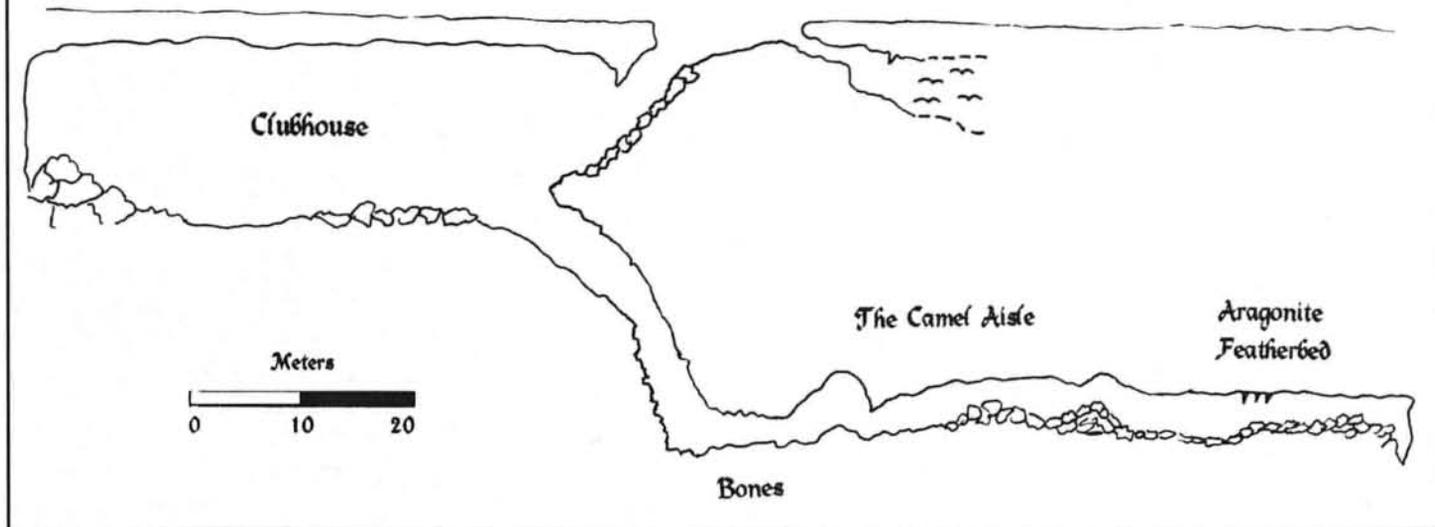
I phoned up Dave Canning. "Hello Dave. Now that it is mid-June and thermometers that only go to 120° are exploding everywhere, only a genuine madman would want to drive out to the caves, right? ... which is why I'm calling you..."

Knowing it would be my last chance to show Murubbeh Cave to the man from the Ministry, Dave agreed to a trip and we worked out a timetable that would avoid exposure of our parked vehicles to the full brunt of the



Susy Pint dressed in typical women's garb, Dahl Sultan

Dahl Murubbeh - Profile



noonday sun. "We can drive out late in the day, explore by night — maybe even squeeze in that survey—and head back early the next morning," I suggested.

"I caught that casual aside about surveying," replied Dave, but I must admit I'd like to bring a digital thermometer into the Camel Aisle just to prove the temperature is not 65° F." Next, Dave the Mining Engineer went into an explanation of the Laws of physics governing underground rock temperatures which demonstrated that a few hundred meters this way or that way doesn't mean a thing, in fact an extremely deep cave would actually be warmer than one nearer the surface. I had to admit that my counter argument ("But it *feels* like 65°!") didn't carry much weight against the laws of Newton and Einstein.

A day or two before the trip, I got a call from the Ministry. Apparently someone had pointed out to them that it would be totally *majnoon* (crazy) to drive out into the trackless desert in 120° temperatures. So the trip was off. However, when I called up Dave, we discovered that each of us had secretly been looking forward to one last desert sortie and since when did a wee bit of heat ever stop real cavers?

A TOTALLY COOL CAVE

So, on June 22, 1995, we reached Murubbeh's entrance early in the evening. A pleasant breeze was blowing and, although it wasn't cool, neither was it anything like the oppressive, stifling atmosphere of Riyadh in the summer. Without asphalt and concrete to retain the heat and buildings to block the breeze, the capital must have been like this in olden times.

We proceeded to the far end of the

Camel Aisle and began the survey. After a while, Dave said, "OK, I give up. I've been monitoring the temperature for half an hour and there's no doubt: it's 62° F in here!" It was a relief to know that my keychain thermometer's reputation had emerged unscathed.

All we needed, then, was an explanation of *why* this passage, 35m deep, is much colder than nearby cavities at both greater and lesser depths. The best theory I've heard was given by geologist/caver Chris Lloyd after seeing a video tape of the cave. He pointed out that the large entrance plus the closed-off lower passage form an ideal cold air trap which would be replenished every winter by the occasional near-freezing temperatures. Chris also pointed out that many formations in Murubbeh are very similar to those of Lechuguilla, suggesting that sulfuric acid may have played an important role in its formation.

IN THE HANDS OF THE VANDALS

Speaking of formations, our survey brought to light a suspiciously bare spot in the ceiling

just next to the aragonite feathers. "Someone was at this with a hammer," exclaimed Dave. "It looks like there was a big gypsum formation up here." Sure enough, a look at the ground below revealed broken pieces of what were once grooved gypsum needles over a cm thick. Whatever they removed had been very different from the other formations in the cave, perhaps its crowning glory.

Next morning, just before we left, I went into the Clubhouse for a few last minute pictures and measurements. In the course of my wanderings, I came across two heaps of trash and garbage. Rotting sheep bones and crushed soft-drink cans demonstrated how badly the local people are in need of environmental education. However, in their hands lies one of the most beautiful and fragile natural wonders of Saudi Arabia. Perhaps it is inevitable that the rest of the formations will go the way of the smashed gypsum needles, but I continue to hope that steps will be taken to educate the local people and enlist their aid in protecting and preserving Dahl Murubbeh, their unique and beautiful "crystal palace."

Perhaps the day will come when a Saudi organization will launch a project to fully survey their fascinating desert caves and to discover ways in which they can be preserved for future generations. If you have suggestions or comments or would simply like to be involved in such a project, please contact me: jpint@foreigner.class.udg.mx

¹*The Caves of Ma'aqala* by J. Pint, NSS NEWS, Sept. 1985, pp. 227-282; *Karst Landforms in the Kingdom of Saudi Arabia* by Peters, Pint and Kremla, NSS BULLETIN, June 1990, pp. 21-32.



Graffiti in what, not long ago, was a virgin cave

The Archer Caves

By Buford Pruitt, Jr.

I was looking for something to do one day in 1971 when a caving buddy, Dan Casali, encouraged me to check out some caves discovered by members of the Florida Speleological Society in the late 1960s near the town of Archer, Florida. Little did I know that a 25-year string of discoveries awaited.

The Archer Caves lie between the small towns of Archer and Williston in Levy and Alachua Counties. Several exceed half a kilometer in length, although most are less than 100 m and rarely have enough room to stand in. The Archer Caves interested me because they were less than an hour's walk from where I lived, cave density is very high and they are rich in wildlife and fossils. Personal goals with the Archer Caves Project have been to find and document the locations of all caves in the project area, survey as many of them as practicable and identify those of significance.

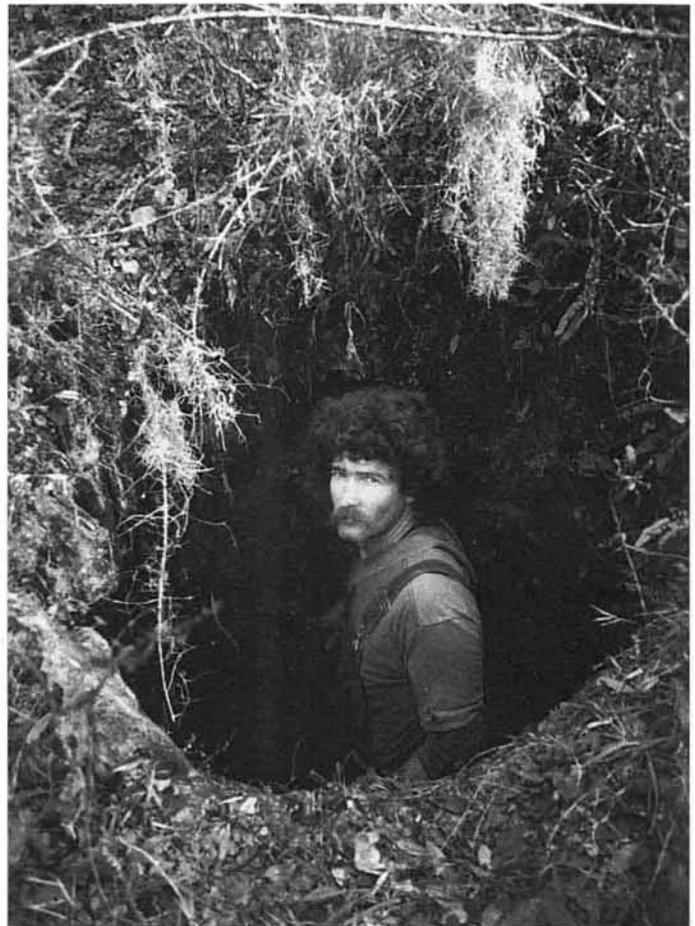
The Archer Caves are in the Williston Limestone Plain at the edge of the Newberry Ridge. The Newberry Ridge is a Pliocene-aged sand dune island sitting on Early Tertiary limestones which also form the substrate for the Williston Limestone Plain. The ridge and plain are within the Ocala Uplift District, a broad limestone region that was uplifted in Early to Middle Tertiary times. The rock containing the caves is the Eocene-aged Ocala Limestone (Suwannee Limestone). It is very soft rock which breaks easily and contains very little chert. This and other sedimentary beds contain the Floridan

Aquifer, one of the most productive in the world and the source of numerous sinkhole swimming holes back in the woods.

The depths of the sandy sediments overlying the limestone range from 20m+ on the ridge top to less than 7m on the plain. The Archer Caves are at the edge of a karst prairie that is sunk into the Williston Plain approximately 2 to 3m. The sediment overburden around the prairie's edge is even thinner, often less than 1 m, and as a result, cave entrances may be less likely to fill up with soil and become inaccessible. Cave frequency is further increased by the sinuousness of the prairie's edge. Finally, "ridge-walking" is easy on this pastoral, undulating plain and prairie; pastures, hayfields, woodlands, pine plantations and croplands are kept relatively free of underbrush by livestock and cultivation and are easy to search.

We now know of at least 78 caves in the 22.8 sq km (8.8-sq mile) project area, representing an overall density of 3.42 caves per square km (8.98 caves per square mile). Digging at the entrances of several promising plugged sinks will probably increase this number further. Two of the Archer Caves (Point and Octopus) are among Florida's 10 longest dry caves and two more (Matthews Fossil and Running Buffalo) are among the state's 20 longest dry caves.

Active crystalline formations are rare and small in the Ocala Uplift District, but Archer Caves regularly sport flowstone and draperies, and sometimes also stalactites, stalagmites, rimstone pools, soda straws, helictites and popcorn. In pondside caves, stalagmites and draperies are regularly built up during periods of exposure to air and alternately eroded when inundated by high water tables. One Archer Cave (Dessert) is significantly more decorated than any other, being perhaps the second most decorated cave in the Ocala Uplift District, which is half of Florida's cave geography.



James Brown in a solution pipe entrance to Octopus Cave

Buford Pruitt, Jr.

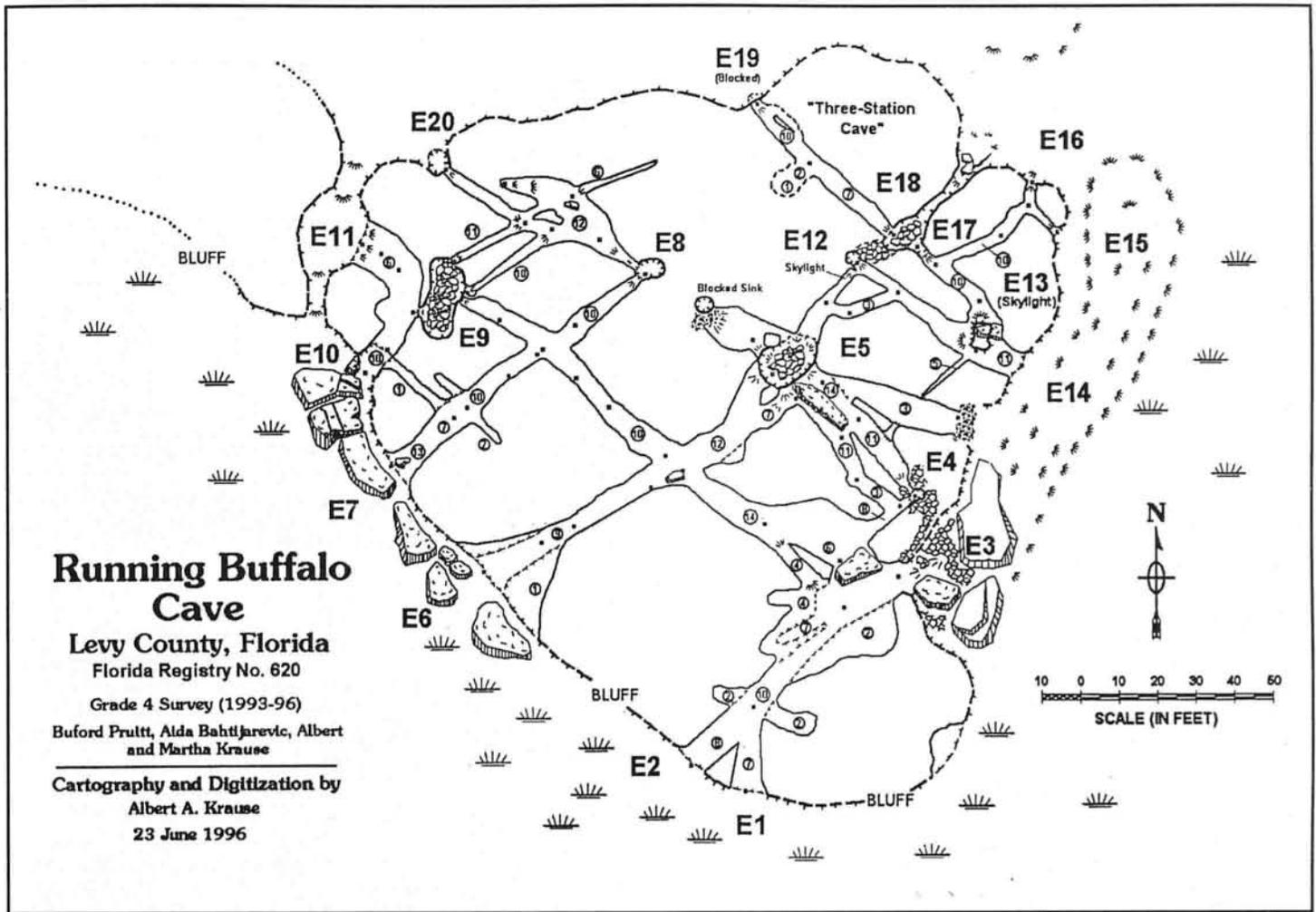


Buford Pruitt, Jr.

Tom Israel at the entrance to Catfish

It was immediately obvious during the first ridgewalk that the area has a high cave density. A 10-acre portion of a low, forested limestone ridge flanked by intermittent grassy ponds quickly produced almost a dozen caves, of which over time we have mapped Alligator's Lair Cave, Catfish Cave, Dolphin Cave and Dessert Cave. Other caves found there that day were Floyd Collins Memorial Cave, Leotard Cave, Day of the Fish Cave, Turnaround Cave and two others unnamed.

These caves are in a splendid old growth hammock (hardwood forest) dominated by giant forest-grown live oaks interspersed with mature winged elm, Southern magnolia, pignut hickory, redbay, ironwood, laurel oak, water oak, sweetgum, basswood, sugarberry, Southern red cedar, ash, soapberry, dogwood, redbud and buckthorn, among others, all tied together with lianas of wild grape, Virginia creeper, trumpet creeper, yellow jessamine and poison ivy. Ground cover is sparse under the dense subtropical hardwood shade, but includes small ferns, terrestrial orchids and partridgeberry, and there are many kinds of mushrooms. The soil is too rocky for tillage,



and the forest appears not to have been clearcut for at least 150 years and possibly longer, although it has been selectively logged and cattle have long grazed here.

The hammock's live oaks are mostly 1 to 1.5m in diameter but occasionally swell to over 2m, and they and other forest hardwoods grow to heights of 35m and more. I ascended to the tops of some of these giant oaks via bowfishing and caving SRT gear in the 1970s when arborescing was becoming popular among botanists and forest canopy entomologists in Oregon and Costa Rica. It is awesome to find oneself in a tree that is still a meter in diameter at 15m above the ground. Although these trees look ancient, live oaks thicken fast - these might be only 120 years old - but I think they are over 200. For one thing, their straight, tall trunks in an uneven-aged forest demonstrate they grew from seedlings that sprouted in an already-established forest, so this mature forest canopy may have existed for at least 250 years.

Up in the canopy limbs of the old live oaks grow thick mats of epiphytic resurrection fern, green-fly orchid, Spanish moss, wild-pine and an occasional garden weed like prickly pear or poke salad. Their stiff outstretched leaves, stems and old flowering stalks snag falling Spanish moss, twigs, acorns and leaves, and vines wend their way through it all. Their roots permeate the live oak's bark, opening it up to

decomposition and creation of a simple organic soil. Epiphytes try to grow over the tops as well as the sides of limbs, but mammals use the limbtops for paths so much that they beat down the bark and vegetative mat into a well-worn trail. Those mammals (raccoon, opossum, grey squirrel, flying squirrel, gray fox and various kinds of wild rats and mice), and numerous kinds of birds, herps and invertebrates, feed there and contribute their droppings to the epiphytic nutrient budget. To a ground walker, it is a vibrant and unexpectedly rich world, and quite a contrast to the forest floor below or the quiet caves that we are usually there to explore. You can't go caving all the time, so it's sweet when your favorite caving grounds provide clear blue swimming holes and old growth forest ridgewalks, too.

Alligator's Lair Cave got our attention first because its obvious entrance is near our fenceline path. A well-beaten trail of raccoon tracks led directly into the cave entrance at the base of a 3m limestone bluff rising up from the mud at the edge of a small, intermittent marshy pond. A 1.5m alligator has been seen there several times and once was videoed and hilariously narrated by Brian Houha. The cave is created at the intersections of several vertical joints and the water table; it has a second entrance which is very tight, and a third entrance beyond a crawlway so tight that the only caver ever able to make the through

trip, to my knowledge, was Charlie Gibbs' son when he was very young (7-8 years?). There is evidence of rock quarrying long ago at the bluff. The conspicuous entrance has probably been entered by many people many times in the past.

Although I mapped and gave the cave a different name in 1977, Bill Sibley-Deml and Al Krause mapped and published it under the present name in 1991 and thus earned the honor of naming it "officially." This is the kind of thing that can happen when cavers are unaware of what each other is up to because (ahem) one doesn't publish his own work.

The vertical, main entrance to **Catfish Cave** is at the base of a large live oak, its roots being used as a ladder for access to below. Its entrance room is formed by collapse of a large part of the ceiling into a horizontal passage, which extends beyond the rock collapse to form a second room at a slightly lower level. Two other crawlway entrances to the entrance room were also created by the ceiling collapse. There are several joint-controlled passages extending away from the second room, the floors of which have a few calcite stalagmites and flowstones that seem to be alternately accreted and eroded. A boulder at the entrance to the second room contains a fossilized vertebrate bone embedded in flowstone. Several unfossilized bones and a densely mineralized bone were collected by Dan Chamberlin and deposited

at the Florida Museum of Natural History (FMNH).

Catfish Cave nearly always has several yellow bullheads and spring chub minnows in its two pools. I have occasionally seen the brown bullhead and once a warmouth sunfish in the cave's pools and have collected aquatic macroinvertebrates (Oligochaeta, Gammaridae, and Isopoda) from them, also. A handful of small bats can usually be found in mini-domes in the ceiling just inside the main entrance. Tree roots and detritus are abundant in the entrance room.

When **Dolphin Cave** was entered first by Brian Houha in 1973, he had to squirm under water feet first and on his back to get from the entrance passage to the main part of the cave. He somehow derived the cave's name from that experience. The cave consists of a walking sized vertical passage leading to a low horizontal bedding plane room that is rounded (10 to 15m wide) and low (0.3m high). It looks like the inside of, and so we call it, the Sand Dollar Room. There are many fossil crabs in the limestone, with at least four in one small dome. Dan Chamberlin and I also collected bones here in 1981 for deposit at FMNH. Spring chub minnows have been seen here but not bullheads. Blue-green algae coats the sheltered, undercut rock at the entrance.

Dessert Cave got its name by being the last cave found the first day Dan Casali and I explored the area. Its entrance was blocked with rocks and it was late in the day so we did not enter. A few months later, Harry Hazen, Chuck Spitzner and I moved the rocks and entered the cave at the end of a long day of exploration. Discovering abundant formations made it again feel like dessert - it even had a "frosted cake" in its furthest cranny. We had noticed that, although the entrance blockage looked like breakdown, it

Nestling black vultures in Running Buffalo Cave

was rather flimsily erected. This led us to suspect it is artificial, so we always re-block it when we leave.

Dessert Cave has a pool of water in it at almost all times, and a first order stream that flows only during periods of high rainfall. The troglobitic pallid cave crayfish (*Procambarus pallidus*), yellow bullhead and spring chub minnow have been seen in the pool. Raccoon tracks are usually present, and a cotton mouse had a burrow in the cave in spring of 1979. An opossum was denned up there the first time we entered, but our visit disturbed it and it has not been seen since even though the cave probably receives rare visitation.

After exhausting the cave potential of the first ridge, we wandered over to the next promising area, adjacent to another intermittent grassy pond. Here we found **Octopus Cave**, believed for over 15 years to be the longest of the Archer Caves, and close by found Sugarberry Cave, Arthropod Cave, Chisel Fissure, Rather Maudlin' Cave and six unnamed caves.

Octopus Cave is now the second most extensive cave known in the project area, with 568m (1,863ft) of mapped passageway, primarily crawlway and kneelway. Vertical,

joint-controlled passages have a sandy, organic soil; low, horizontal water table rooms have mucky sub-strates. Crystalline formations are rare in Octopus, and all appear inactive; those on the floor display evidence of erosion but not of recent accretion. Water levels are high enough most of the time to place more than half of the cave



Martha Krause

beyond a sump composed of a low, right-angled crawlway through muck which might be possible to pass while holding one's breath. Once, I attempted to dig upward from within the cave to create a new entrance through a solution pipe filled with dry clay, but the clay was too hard to effectively penetrate with hand tools.

We found numerous bones scattered about on the floor of Octopus Cave near entrances, and had to move them out of our way during surveying to keep from crushing them. Samples were collected in 1977 by Brian Houha and carried to Dr. David Webb, a paleontologist at FMNH. We later escorted then-graduate students Gary Morgan and Greg McDonald to Octopus to collect more fossil bones plus sediments to sieve in the laboratory for microfossils. They found alligator, rattlesnake, tortoise, horse, deer, llama, capybara, short-faced bear, and modern cow and pig. Surprised at the Plio-Pleistocene fauna, we immediately began watching out for bones and carefully setting them aside so they would not get destroyed.

This cave is also relatively rich in living fauna. I have seen alligators in it on two occasions, both times during winter. The first was during a caving trip on which I took a bunch of kids. While crawling over some old tires well into the cave, I suddenly realized that a tire I was crawling over was actually a 1.5m 'gator! Fortunately, it was sound asleep in hibernation, although I was certain my pounding heart would awaken it. The second time, a dozen or so cute li'l half-meter *el legartos* were spotted near one of the cave's pondside entrances during a Florida Cave Carouse tour. Other species observed in Octopus Cave include troglobitic crustaceans, daddy-long-legs, web spider, yellow bullhead, pig frog, leopard frog, greenhouse frog, little brown bat, Eastern pipistrelle, shorttail shrew, cotton mouse, pond slider and raccoon. A barred owl has been seen roosting at one of the cave's entrances.

Buford Pruitt, Jr.



James Brown in a hole that didn't go

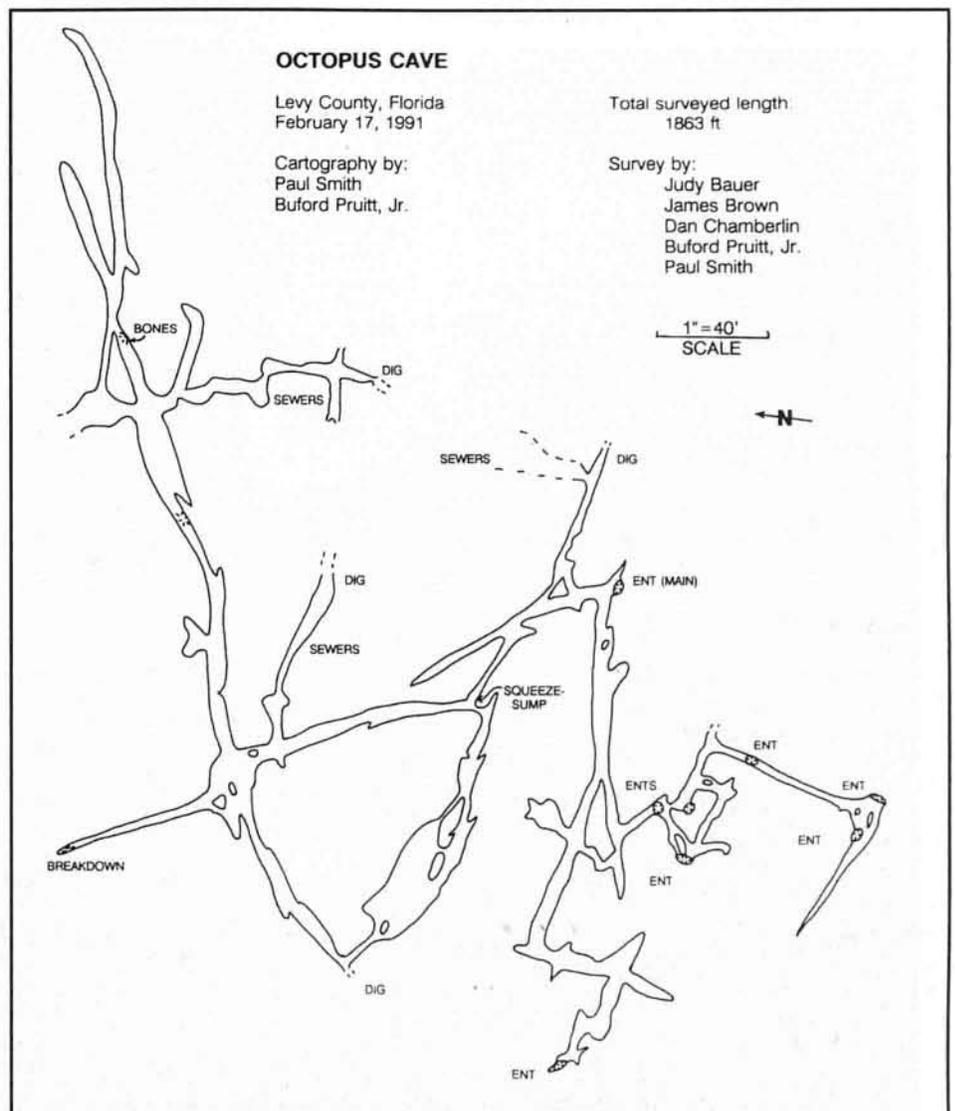
The first of our scientific collections took place in tiny **Arthropod Cave**, with Brian Houha capturing for FMNH in 1976 three species of troglobitic crustaceans: the pallid cave crayfish, isopods (*Caecidotea* sp.) and amphipods (*Crangonyx* sp.). Additionally, the camel cricket (*Ceuthophilus* sp.) has been seen at the cave entrance and a small white millipede (*Ectopodesmus* sp.) inside the cave.

Sugarberry Cave was found by Paul Smith and Steve Redmund in 1976. Aquatic sediment collected then contained no aquatic invertebrates although similar samples from nearby caves did. A troglobitic crayfish (probably *Procambarus pallidus*) has been seen in its pool, and baby garter and corn snakes have been seen at the bottom of the entrance chimney. In November 1981, a rock protrusion that a visiting TAG caver stepped on broke away causing her to fall 3m and suffer mild injuries to one leg and ankle. The rock at the entrances of these caves is rotten and not to be trusted.

In the woods and pastures to the north of Octopus Cave are several small, scattered headwater caves. **Domino Catacombs Cave** is a wide, flat room at the water table with partitions formed by incompletely dissolved walls and ceiling pendants. It is reminiscent of Dolphin Cave's Sand Dollar Room but is higher and wider. The entrance passage is tight and has a difficult bend to negotiate, and cavers with long leg bones must squirm upside down, see-sawing back and forth to enter the cave. Long cavers really should enter first and exit last.

Domino Sink is a karst window exposing an otherwise underground stream; both spring and siphon passages are blocked by large boulders that prevent entrance. When the sink's water level is low a second order stream flows across cobble rocks covered with mosses, liverworts, and Southern naiad, a habitat rich in aquatic invertebrates. Most of the time, however, the sinkhole's water level is 1.5m deep and is murky and smelly due to cattle wallowing, etc. Wildlife observed in the sink include fish, turtles and frogs. The tenant told me there once were wood ducks in this and many other water-filled sinkholes in the vicinity, and that they fed on duckweed and kept the sinks clear. A relative of his went around and hunted them all out one year. I rarely see wood ducks in Archer sinkholes, and thick mats of duckweed cover Domino's water surface.

Dozer's Surprise Cave has its ceiling entrance in the middle of a shallow rock quarry. The entrance was opened by a bulldozer excavating limerock, in this case through the roof of the cave. The bulldozer appears to have fallen part-way into the 2m deep entrance drop, after which the operator backed out and quit and went home. At the edge of this quarry is the remnant of another cave exposed and then partially destroyed by quarrying.



Matthews Fossil Cave is the third longest Archer cave with 234m (769ft) of surveyed passage. I first saw and solo reconned it while ridgewalking in winter, early 1982. The main entrance itself is quite interesting, being composed of the remnants of the bedrock surrounding a solution pipe, at the bottom of which are six entrances to the cave. The vast majority of the cave is formed in vertical joints, and there are no active formations. Pleistocene bones have been collected for the FMNH by Dick Franz and Gary Morgan from the cave floor and from a cement-hard matrix plastered to the ceiling. Of the living biota, I have seen only cockroaches and camel crickets in the cave, although the calcareous soils above support interesting flora such as a soapberry tree large enough to rival the then-current National Champion (a National Champion tree is the largest individual of its species known to exist in the USA).

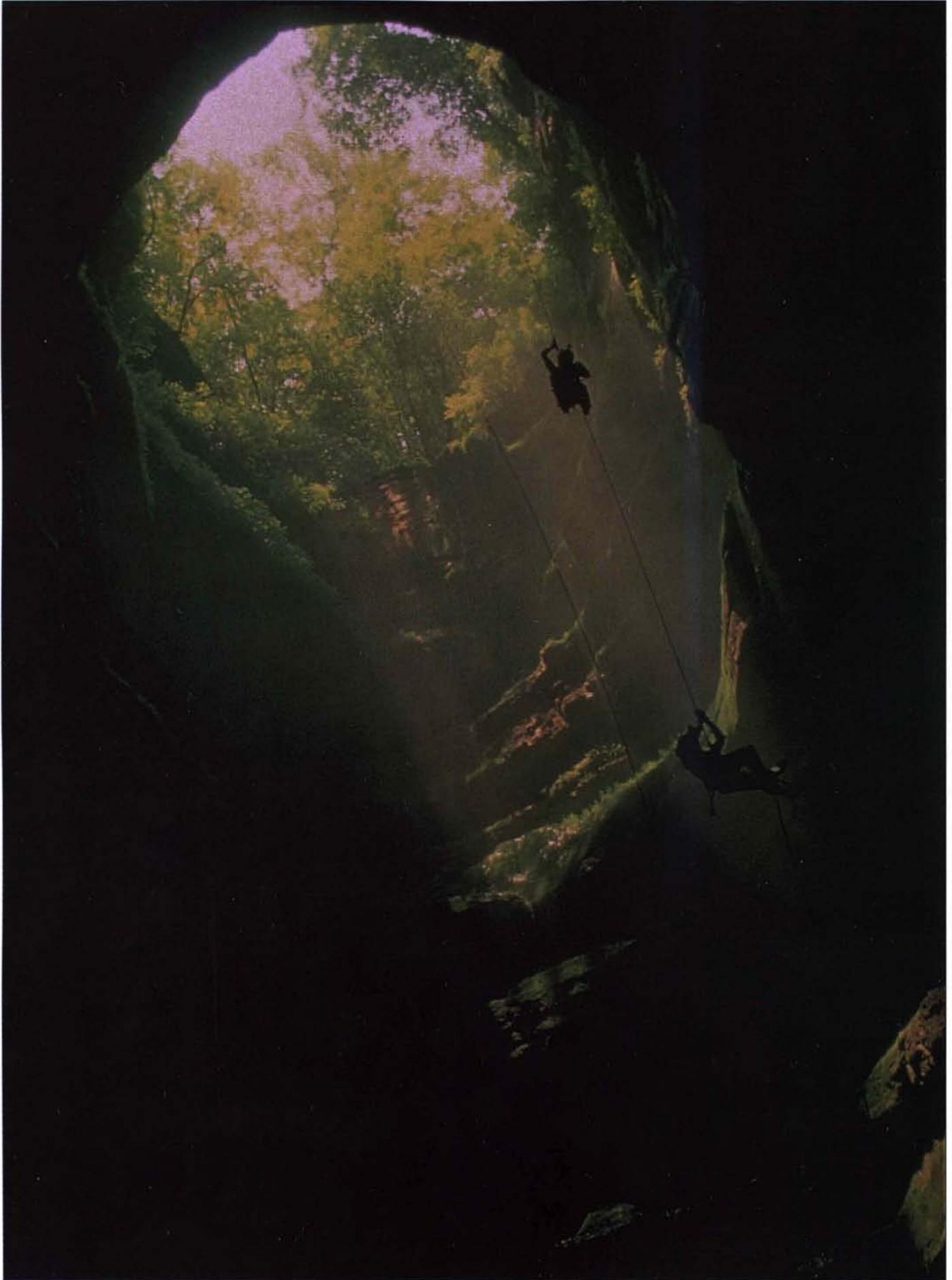
Point Cave was discovered by James "The Trowel" Brown, Rick Reynolds and Bruce "Sleazeweasel" Morgan. It's the longest small cave I've known. There are few passages of comfortable size, few places where

you can stand or even sit, and few places to turn around in. We typically had to crawl backwards out of passages after surveying them. After a trip or two I turned into a flashlight caver. It was pointless to be eternally pushing a helmet ahead through passage too small to wear one through, and there was only one rock above us during the entire adventure. James continued to take his helmet for several trips more than I did, probably because he was using the helmet as a holder for his carbide lamp, a hot little torch. However, even he ultimately left his helmet at home until we finished the Point Cave survey.

Bones. Point Cave has bones. Bones in the sediment, bones in the floor and bones cemented to the ceiling. It even has more than its share of ancient crab exoskeletons protruding from the soft limerock ceiling and walls. On one early trip I collected a long bone and Bruce carried it and some photos of ceiling bones to Gary Morgan. Gary got pretty excited at a knuckle the size of his fist in the photographs, so on a subsequent weekend James and I took him and Art Poyer to the

(continued on page 343)

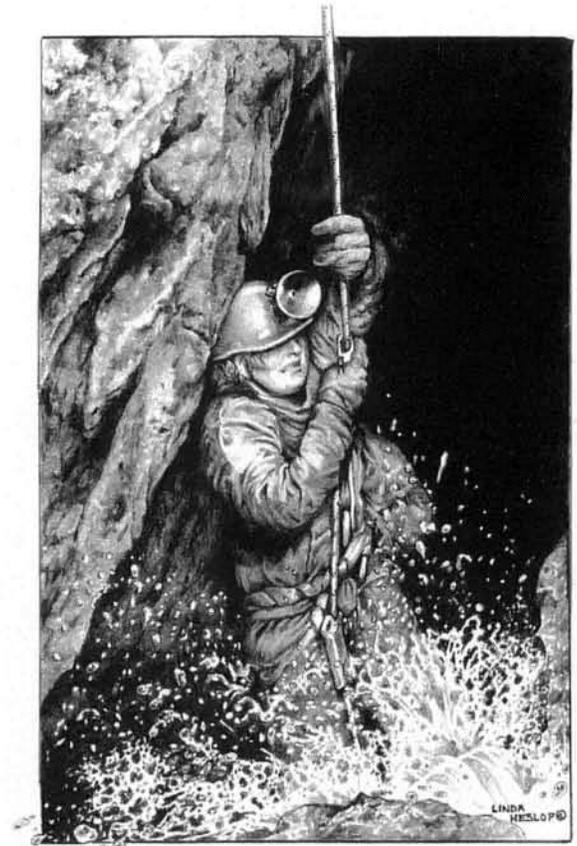
SALON GALLERY '97



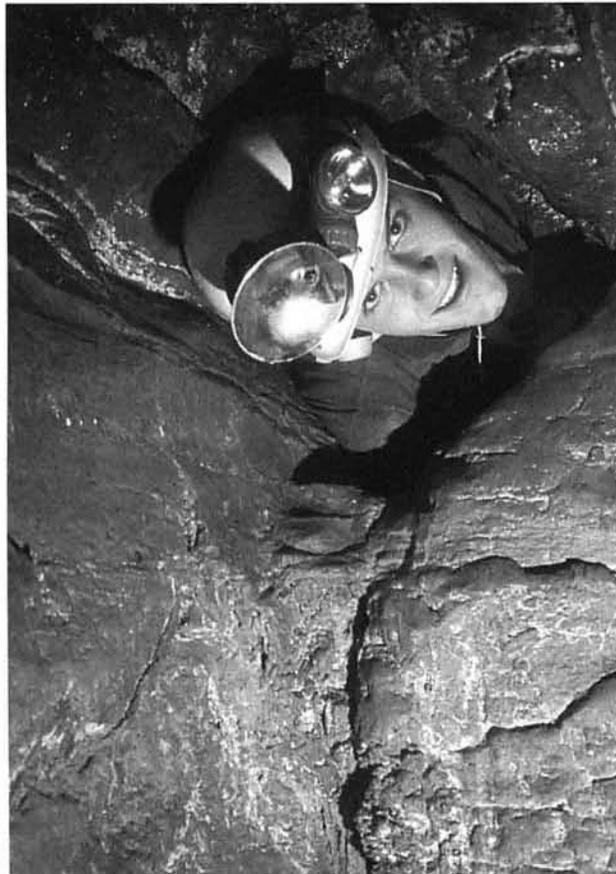
Up, Up, and Away, by Joe Levinson, was a merit award (blue ribbon) winner in the 1997 Salon



Oozing Salt, by Ken Davis, was a merit award (blue ribbon) winner in the 1997 Salon



*Above: untitled pen&ink artwork by Linda Heslop
Left: "Goodbye Blue Sky," by Ken Davis, was shown
in the 1997 Slide Salon.*



*Justin Haley emerging from the "Fallopian Tube" in
Knox Cave, New York. Photo by Simeon Warner*



*Siliceous speleothems on lava speleothems, Mt.
Suswa, Kenya. Photo by Jim Simons*

GALLERY

The Archer Caves

(continued from page 339)

cave, and we mapped while they dug.

Although James and I did all the mapping, Rick found a crucial connection between Point Cave and nearby cave passages that increased the cave's length by approximately 50 percent. Rick was too large to pass through the tight entrance that James and I had entered for our survey, so he went to the unconnected passages and began snooping around. When he heard us talking he realized he was onto the connection we had been looking for and began shouting and searching his way excitedly toward us. Up to that point, James and I were pretty weary of this tedious little cave and were just going through the motions of surveying what we expected would be our very last survey trip there, but when we heard Rick coming toward us from the far side it was like pouring excitement into our ears. Out came James' trowel (for the third time in this cave) and the connection was soon made. We continued the mapping effort with renewed vigor, and James and I returned the following weekend and "finished" the survey. The total length of Point Cave is 712m (2,337feet), which makes it the longest known air-filled cave in Levy County and the ninth longest dry cave in Florida.

The last group of caves discovered include Three Step Cave, Running Buffalo Cave, Ann's Cave and Three Station Cave. First explored by Ann Harman, Ann's Cave is contained within a rectangular block of bedrock that protrudes from the prairie. The block's fracture joints widen into caves at the water table, but most of their passages are tight. A few hundred meters to the north we found Three-Step Cave and Running Buffalo Cave. Both have large, comfortable passages, and you can even run in Running BC. While surveying the latter with Al and Mardi Krause, a pair of down-covered black vulture nestlings were found inside the cave under an entrance at the bottom of a solution pipe. Hissing loudly at us from the dark below, we could not make out what they were until we could observe them from inside the cave. Within a few weeks they had grown from fist size to that of an adult chicken, and had doubled the diameter of the cave entrance opening and shredded the walls of the above solution pipe by clawing down cobbles and dirt in their efforts to get out. It looked like the work of some serious cave vandals.

There is plenty more caving to do at Archer, more caves to be mapped and more yet to be found. We may or may not yet know of the longest or most decorated or whatever. Most of us have moved away, though, and the sands of litigious time are covering landowner welcomes, but we continue, albeit more slowly now, to explore and survey them. And there just might be another 25 years left out there for me.

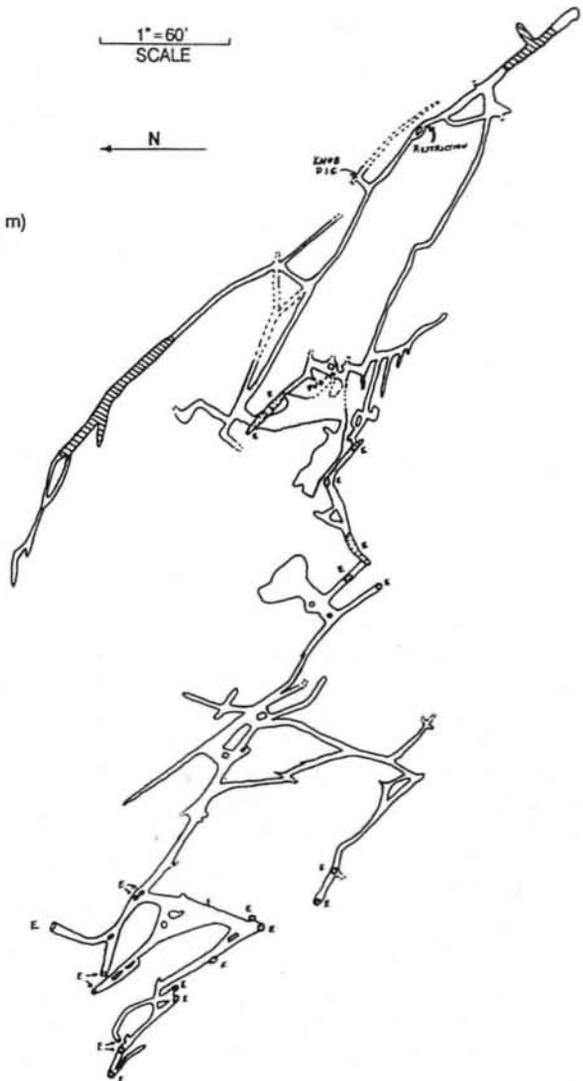
POINT CAVE

Levy County, Florida
September 1, 1991

Cartography by:
Buford Pruitt, Jr.
NSS 17920

Survey by:
James Brown
Buford Pruitt, Jr.
Rick Reynolds

Total Length: 2,337.48 ft (712.5 m)
Total Number of Entrances: 22



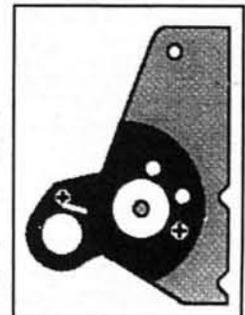
GIBBS ASCENDERS

For People in High Places

Serious Situation? Our #3 and #3S Ascenders for 1/2" rope are strong, safe, and durable. They come in light weight aluminum or long wearing stainless steel. 5000 lbs breaking strength.

Heavy Equipment? Our #4 and #4S Ascenders for rope up to 3/4" also come in light weight aluminum or stainless steel. 5000 lbs breaking strength.

*Not intended for self belay by solo climbers



Check It Out

GIBBS PRODUCTS, INC., 2608 East 3820 South, Salt Lake City, UT 84109
Phone (801) 272-8354 Fax (801) 277-6564

1998 NSS Convention Alert Time to Plan Ahead

Reserve August 3-7 on your caving calendar and plan to come join us high on top of the Cumberland Plateau, in the heart of TAG country, for the 1998 NSS Convention in Sewanee, Tennessee. Bring your vertical gear and ropes for an unforgettable taste of some of the finest caves in the Southeast.

Start planning now for the biggest and best NSS Convention ever. Imagine old Southern charm, iced tea, aged mountain shade oaks, cool humid cave air blowing from Cumberland Plateau fissures, mountain streams tumbling through earth cracks and reemerging through yawning earth gates, a slower pace, everything within walking distance, a seasoned Convention Staff, organized, relaxed, crimson valley sunsets—imagine Sewanee.

ABOUT SEWANEE

The town of Sewanee is located on Monteagle Mountain in the heart of TAG caving country about half way between Chattanooga and Nashville on I-24. The University of the South, a picturesque campus in the middle of the town of Sewanee, is welcoming NSS cavers for a second time. There are over 5000 caves within 1 ½ hours driving distance from Sewanee, including some of the deepest pits in the lower 48 states. There are plenty of exciting things to do both above and below ground for everyone.

CAMPING, ROOMS AND ACCOMMODATIONS

There are well over 1000 flat, shaded, drive-up-to-your-tent camping spots that have proven to be the perfect balance between condo camping and privacy. Ample water and relief centers (cleaned and stocked twice a day) will be conveniently provided throughout the entire campground.

There are ample Single and Double Campus dorm rooms available at \$25.00 per person per night. 5 nights single occupancy \$126.00, 7 nights single \$146.00, 5 nights double \$90.00 per person and 7 nights double \$107. Wake up and stroll to breakfast and sessions!

If you plan on camping at one of the nearby Monteagle hotels (4 miles away,) make your reservations early because August is the height of tourist and vacation season.

Cloud's Rest (Bed & Breakfast) 931-598-0993

Grace Cottage (House to rent) Located two blocks from registration, this cottage has 1 Dbl, 2 sin. and a futon. One small bath can service 6 people with all the charm of your

own mountain home. There is a two night minimum which runs \$250 while each additional day costs only \$85. 205-772-7332

Budget Host (115 room motel) \$49.98 for king or 2 Dbls. 931-924-2221

Days Inn (Motel) The kind people of Days Inn have extended an "NSS special" of \$42 a night for the five days Sun-Thurs. Daily rates \$45. 931-924-2900

Dubose Conference Center has extended the use of their fine facility. They have numerous types of accommodations from hall shower rooms, motel to cottages. Rates from \$18.50 to \$37.00 per day per person. Some rates are priced for double occupancy. 931-924-2353

Edgewood Inn (Bed & Breakfast) 931-924-2669

Monteagle Assembly (Houses Avail) 931-924-2272

Northgate Inn (Bed & Breakfast) This fine facility has 7 rooms available. 4 Queen rooms at \$89 a night and 3 other rooms that can sleep more than 2 people at \$97.90. No cheap continental breakfast here. Step aside Shoneys. 931-924-2799

Post Cottage (Bed & Breakfast) A charming home with 2 bedrooms with 2 queen beds with full efficiency kitchen. \$100 a night in Monteagle. 931-924-2758

Oliver's Smoke House (Motel and RV Park) 85 Rooms ranging from \$39.80 per night weekdays to \$130 weekend suites. 14 Cabins and 50 RV sites. 931-924-2091

EARLY REGISTRATION

Make this first important step and REGISTER EARLY. There are discounts for early registration. Avis VanSwearingen, the Convention Registrar (205-498-2420 or avis@mindspring.com) can forward you a registration form if you need one.

CALL FOR PAPERS

Do you do interesting things in caves? If so, the rest of the caving world wants to hear about it. The "Call for Papers" is now sounding! Give a talk about your caving adventures, discoveries, equipment, techniques, research and/or projects. Contact the chairperson of the particular NSS Section in which you are interested in presenting and make arrangements to have your paper published and your talk heard. If you need more information about NSS Section chairpersons, contact Pat Kambesis, (770-491-8587, pkambesis@coca-cola.com) or consult the Convention web page. An



abstract of your paper (250 words or less discussing the highlights of your topic) is needed for publication in the Convention Program Guide. The DEADLINE FOR ABSTRACTS IS FEBRUARY 15, 1998—SO ACT NOW.

Keep on top of important items:

CONVENTION CHECKLIST

- Reservations for rooms
- Registration form
- Transportation arranged
- Calendar/schedule adjusted
- Papers planned and in full process or preparation
- Auction items being considered
- Plan pre and post activities
- Get in shape for contests
- Costumes?
- Award nominations (i.e. Fellows)

SPECIAL CONTACTS

If you have any questions, please contact the appropriate person below. For general information, contact either the Registration Chair or the Chairman.

Chairman - Wm Shrewsbury
(423) 886-3296

taglite@bigfoot.com

Vice-Chair - Diane Cousineau
(706) 764-2296

104017.2164@compuserve.com

Campground - Allen Padgett
(770) 638-4144

75313.25@compuserve.com

Food Service - Bill Jackson
(706) 863-7019

Bill588716@aol.com

Geology Field Trips - Alan Cressler
(404) 255-6748

cressler@usgs.gov

Housing Facilities - Doug Durig
(931) 598-1570

ddurig@sewanee.edu

Howdy Party - Stan Olekas
(404) 995-9835

cavestan@roman.net

Jr Speleological Society - Dorianne Lane
(423) 886-6219
71155.765@compuserve.com
Meeting Facilities - Kenneth Huffines
(770) 469-3197
khuffines@mindspring.com
Photo Salon - Dan Barnick
(770) 514-8862
bunchnick@mindspring.com
Pre/Post Cave Trips - Bill Bussey
(919) 403-7275
billbus@gte.net
Public Relations - Bruce Smith
(423) 344-4716
102216.1430@compuserve.com

Publications - Geary Schindel
(615) 781-6829
GSchindel@aol.com
Registration - Avis VanSwearingen
(205) 498-2420
avis@mindspring.com
Security - Steve Hudson
(706) 764-2296
70451.1476@compuserve.com
Special Events - Jim Wilbanks
(706) 462-2316
WILBANKS_J@al.cps.k12.tn.us
Speleo-Auction - Monty Keel
(706) 673-2281
montkeel@www.dalton.net

Speleo-Olympics - David Smith
(423) 499-0162
DSmith2773@aol.com
Sessions Chair - Pat Kambesis
(404) 248-9538
pkambesis@coca-cola.com
Transportation - Wayne Prince
(931) 598-0426
Treasurer - Bill Stringfellow
(770) 751-1257
bills89@idt.vivid.net
Vendors - Carol Jackson
(706) 863-7019
OleBat@aol.com

TECHNIQUES AND SAFETY

DESCENDING 101

by *Bill Cuddington*
S.T.C. Chairman

Notice that I didn't say "Rappelling 101", because sometimes the word rappel strikes fear and terror in the hearts of some; or worse yet, the mention of a rappelling class makes some folks think they are going to participate in a "thrill-seeking" activity. Naturally, the first few rappels are exciting. But after a dozen or so, most folks either quit or realize there is more to ropework than just rappelling.

The following is what I feel is a simple non-terrifying way to teach "Descending 101". First have the student just practice putting their Q.A.S. (quick attachment safety) on the rope and then their rack. They do it in this order; always putting on their Q.A.S. **first**, and then the rack. They should practice this away from the drop itself, so that when they approach the actual drop, this Q.A.S. and rack engagement will be automatic. Yes, I said **rack!** I believe that the student should become very familiar with this before moving on to any other device.

Now the student should be ready for their first actual rappel, which should be short and against a wall all the way. By being against the wall, a top belay, if needed, may be employed. Many youth groups insist on a top belay. Also, a bottom belay must be available! I like to have the student do this "easy" drop many times before even thinking of moving to anything longer.

Another technique I use at the shorter drop is to have a slower rope which is either $\frac{1}{2}$ " or a stiff 7/16" rope. I don't want the student to have to worry about lack of friction. I just want them to get used to the technique of rappelling and get acquainted with the height of the wall. Before they leave this first drop site, they must also become acquainted with a "normal non-stiff" rope which requires paying more attention to control.

Rappel racks should have at least six bars.

In fact, I like to use the 7 bar heavy-duty variety. This "7 bar" so far has had enough control for everybody. I always use this at the N.S.S. Convention when I teach rappelling for the Vertical Section Class.

An absolute must for optimum rack operation is that the student learn to put their top hand on the last bar that is engaged to the rope. This allows them to learn incremental control. The student must learn this immediately, before they get into the bad habit of holding on to the top of the rack or putting their top hand on the rope above the rack. If your top hand is in the wrong spot, you lose your incremental control capability.

Next we go to a longer drop of 50 ft. or more. Needless to say, you should be able to walk easily to the bottom and to the top of any of these training drops. At this longer drop, we rig a "normal" 7/16" "non-stiff" rope. Using their 6 or 7 bar rack, the student should be ready for this. All day long, we have warned them about the danger of getting hair or clothing caught in the rack. In case this were to happen, there is a good technique which can be used. Ed Seaman wrote this up once. You will need a rope that is **more than twice the height** of the drop. (Remember we are talking of a training drop—less than 100 ft., so a long enough rope should be no problem.) The rope is rigged to a tree or trees with the "wrap" technique and a figure 8 knot with a screw-link. Also, a rappel rack is rigged to the nearest tree to the drop, with the rope going down the drop rigged into **all** the bars of this rack. If the student gets something jammed in their rack, the rope on the tree or trees may be **carefully** un-wrapped and fed through the rack, on top, thus lowering the student safely to the ground. Be sure to pull the rope back up and rig it again to the tree(s) **and** the rack, just in case another student gets snagged in the rack.

When the students are descending, they are taught to maintain a slow to moderate speed. **No bounding is encouraged.** Also, no

loud yelling unless they are in distress and need help and/or a belay. Of course the instructors should **not** be showing off by doing 'hot dog' rappels. I feel that ropework can and should be taught in a professional manner.

Equipment required: For this "101" class, the student is not required to bring anything but their lunch, a pair of work gloves and wear boots. This is just a basic introductory course. Some of these students may decide not to pursue ropework as a sport. I just hate to see folks spend a lot of money if they are not sure about whether they are going to continue this activity. We, the instructors, never have had any trouble procuring enough loan out equipment for the class.

I deliberately have not mentioned ascending, as I will address it in the future. However, I will say that ascending techniques are taught at this class. Pulley systems are set up for this so that the student may be lowered to the ground when they have finished climbing or for equipment adjustment. The students can learn to become proficient in rope climbing and enjoy it. Also, that myself, Miriam and others merely use the rappel as a means to get down the drop safely and that we really look forward to the ascent!

Finally, the students leave the class with this phrase ringing in their ears: "**You must be just as careful on your 10,000th rappel as you were on your first!**"

REFERENCES:

Cuddington, Bill. "The Importance of a Quick Attachment Safety", *NSS NEWS*, May 1984, pg. 189.
Kambesis, Patricia. "Are you Using Your Safety?", *GEORGIA UNDERGROUND*, Vol. 29, No. 3, pg. 45.
Smith-Padgett, Ed., *ON ROPE*, (New Revised Edition), pg. 319.
Smith-Padgett, Ed., *ON ROPE*, (New Revised Edition), Q.A.S., pp. 60-61-104-132.

The Ranshaws of Covington, Kentucky and Mammoth Cave

by Charles J. DeCroix NSS#43233

In 1908, Max Kämper, a young engineer from Berlin, Germany visited Mammoth Cave. After taking several cave tours his curiosity was so aroused he obtained permission from Albert Covington Janin (owner/trustee of Mammoth Cave) to produce a surveyed map of the cave in exchange for food, lodging, and caving. Kämper's visit to Mammoth Cave lasted eight months, resulting in an extensive 37 mapped miles of cave. Beautifully illustrated in five colors, Kämper's map represents one of the premiere examples of historic Mammoth Cave cartography. Not only was it one of the first extensive surveys of the cave, it also serves as one of the rare sources of early passageway names in the world's longest cave. "Max Kämper and the Mammoth Cave Connection" is a research project documenting the history of cave passages/features cited on the Kämper Map. This segment focuses on the history of Ranshaw Avenue and the Ranshaw family.

Dr. Willis Warwood Ranshaw was the son of English-born parents Henry and Emma Ranshaw. He was born in Covington (Kenton County), Kentucky on August 4, 1872. The Ranshaw family resided at 223 West Sixth Street, Covington, Kentucky.

After graduating from Covington High School, Willis Ranshaw entered the Cincinnati College of Pharmacy. Upon graduating he practiced pharmacy with E.L. Pleck for 11 years, then studied medicine at the Miami College of Cincinnati, graduating in 1896. Dr. Ranshaw served several terms as Health Officer of Covington, Kentucky.

From 1902 until his death at Mammoth Cave on January 18, 1911, Dr. Ranshaw leased the Mammoth Cave Hotel, serving as General Manager. Ranshaw Avenue, located in Mammoth Cave, is named in his honor. The earliest reference to Ranshaw Avenue appears on the Kämper Map of 1908. Dr. Ranshaw had visited this part of the cave as early as 1906. His signature, along with Ed Hawkins (guide), John Thorpe Ranshaw (Willis' nephew), and C. Kirkpatrick can be found in nearby Minna's Way, dated September, 1906. Ranshaw Avenue was discovered by prehistoric Indians thousands of years ago, and rediscovered by modern explorers in the late 1800s. It is likely that Willis' trip in 1906 resulted in the passage being named in his honor.

Willis Ranshaw came from a large family of eleven children, but never married. His brothers and sisters, along with their children, travelled to Mammoth Cave for summer visits. Willis' brother, Dr. Alvin A. Ranshaw (a dentist from Covington, Kentucky), visited during summers with his wife Dollie (Bond) Ranshaw and daughter, Dorothy.



Matt Bransford, Dorothy Ranshaw, and Dad Lively at Historic Entrance, September 25, 1908 (from the private collection of Dorothy Louise Ranshaw)

After extensive research I was surprised to find Dorothy Ranshaw alive and residing at her father's house in Covington, Kentucky. On October 3, 1996 I had the honor of visiting Dorothy (who had just celebrated her 90th birthday!) to conduct an interview. We talked for hours as Dorothy relived and shared magical memories of her youthful visits to Mammoth Cave. Dorothy also produced an incredible scrapbook of unpublished photographs and memorabilia from her Mammoth Cave childhood. Her memory was incredible! As we leafed through wrinkled and torn pages of her photo books, Dorothy identified many people and Mammoth Cave locations. As the afternoon ended and Dorothy grew fatigued, I thanked her for her time and cooperation and began my trip back to Mammoth Cave. I smiled all the way home!

Following is an excerpt from my interview with Dorothy, giving a rare glimpse into the Ranshaw family and their connection with Mammoth Cave:

"I have very fond memories of Mammoth Cave. We used to spend the summers down there, and it was always so much fun. It was a two day drive from Covington, and sometimes there would be five of us and two dogs all packed together in the car. Uncle Billy [Willis Ranshaw] was very good to all of us, and the

boys were always exploring in the cave.

The Covington family [Euclid, Wickliffe, Margaret, and Wells] from Bowling Green would sometimes be at the cave during the summer months. I remember I used to dance with Wells, who was a very good dancer. My cousin Emily used to date Euclid.

One time Uncle Billy saved my life! It was the fourth of July, and I was just a little girl, and we were playing with sparklers. I put a sparkler under my arm and it accidentally caught my thin dress on fire. Uncle Billy grabbed me and smothered out the fire. He was a very big man.

My father [Alvin A. Ranshaw] would sometimes lead cave tours in the busy summer months when conventions would come to the cave. He told me once of how he used to go down on the Echo River by himself and float along in the boats. One time he floated so long, that he noticed the water was rising in the river, and he had to follow the torch marks on the ceiling to find his way back out.

I cherish my memories of Mammoth Cave, and it will always be a very special place for me."

-Dorothy Louise Ranshaw

(continued on page 354)

EXPLORATION

Divers from the Sydney University Speleological Society may have found the link from **Spider Cave** to **Mammoth Cave** in the **Jenolan Caves System** west of Sydney, Australia. Divers pushed a sump in Spider Cave and discovered a lead heading toward Mammoth, 300 meters away. Surprisingly the announcement in the June 13, 1997 *Science* fails to confirm the link. The caves harbor species, like the crustacean syncarid, that became extinct elsewhere in the area.

The Discovery Channel aired "Glacier Below the Ice" on May 4, 1997. The subject was a French expedition to Greenland which examined caves carved into glaciers by melt water. Large surface streams form in the summer and eventually open moulins, pits, into the glaciers, and then flow under the ice. The expedition's goal seemed to be both to collect both biota living in the ice as well as allow one of the group to set a new glacier rappel depth record. Biota found included algae and tardigrades. The record rappel into *Moulin Paakitsoq* had to be timed when the first cold period froze the surface streams but before the glacial ice at depth filled the cave drainage outlet and flooded the cave. The surface stream entering the cave was an impressive six meters wide by four meters deep. Rappelling with the waterfall was deemed too dangerous not because of the danger of hypothermia but because "breathing air saturated with ice crystals can cause asphyxiation." Weather conditions prevented extension of the 173-meter moulin depth record. A non-record rappel included a toast with Scotch, on rope. (Also *Rock & Ice*, Number 80.)

COMMERCIAL CAVES

Grand Canyon Caverns, Arizona, was "discovered" in 1927 when a cowboy was

lowered 150 feet into a pit. Finding skeletal remains, a local paper proclaimed "Bodies of Stone Age Cavemen Found." The remains had actually been there only about ten years. Local Indians used the pit as a tomb. The cowboy who found the cave had filed a claim, hoping for gold. Finding none, he decided cave tours would be a good business. Initial tours cost 25 cents and included a ride by rope and winch. Ladders were installed in the 1930s by the Civilian Conservation Corps. An elevator shaft was blasted out in the 1960s. Two weeks worth of Civil Defense rations for 2,000 are still in the cave, as is a mummy—of a bobcat. A mummy of a giant sloth was also found in the cave, lying where it died having failed to claw open a small air hole to the surface. It is now an exhibit at the University of Arizona in Tucson. The guides at the cave claim that once colored smoke was pumped into the cave and it blew out from a cliff inside the Grand Canyon. (*Arizona Highways*, August 1997.)

The July-August issue of *Travel-Holiday Magazine* features **Mammoth Cave**, Kentucky, and **Raccoon Mountain Cavern**, Tennessee and **Marengo Cave**, Indiana ... The July 1996 *Outside* "Foreign Travel" column suggests a visit to Slovenia. One attraction is **Skocjan Cave**, one of 6,000 in the country. Tours are offered by the Slovenian Speleological Association.

SPELEOLOGY

The Senate Energy and Natural Resources Committee passed a bill establishing a national institute for cave and karst research in the Carlsbad, New Mexico, area. The bill was sponsored by the state's senators, Republican Pete Domenici and Democrat Jeff Bingaman. The center would be administered by the National Park Service and New Mexico State University. (*Carlsbad Current-Argus*, June 12, 1997.)

ANTHROPOLOGY/ ARCHAEOLOGY

Scientists announced the discovery of an ancestor common to Neanderthals and modern humans, *Homo antecessor*. The announcement was the result of study of the fossils removed from caves in the Atapuerca Hills in northern Spain. The species is viewed by the researchers as lying between *H. Ergaster* and the branches which developed into *H. Neanderthalis* and *H. sapiens*. Criticism of the taxonomy centers upon the fact that it was developed based on the modern-looking face and primitive mandible and cranium of a single juvenile. Many of the species' fossils (although not the juvenile's) came from **Sima de los Huesos**, the **Cave of Bones**, near Burgos. The fossils date to about 800,000 years before present.

(*Anchorage Daily News*, November 10, 1996, and *Science and Dayton Daily News*, May 30, 1997.)

The Neanderthals may have made music. A bear thighbone recovered from a Slovenian cave has four holes bored into it, resembling a flute. *Homo sapien* bone flutes, dating as old as 35,000 years, have been found in Europe and Asia. The Slovenian flute has been preliminarily dated (by electron spin resonance) to between 43,000 and 82,000 years old. (*Science News*, November 23, 1996.)

Support is growing for an interpretation of cave art as artifacts of shamanism practiced by prehistoric peoples. Archaeologists a hundred years ago predominantly embraced the theory that cave art was an attempt to use "Hunting magic." This was largely based on Australian aboriginal hunting ritual behavior. Structuralism, developed in this century, rejected the hypothesis that any extant group's behavior could be used to interpret prehistoric art from other cultures. Structuralist theory embraced the concept that art gradually became more complex and accurate over time. This concept was contraindicated by the discovery of some of the oldest cave art last year: it exhibited some of the best execution.

A new neuropsychological model postulates that a shaman goes through three stages. First geometric figures appear, then these figures are interpreted as objects known from experience, and finally a hallucination involving these objects seems to be an actual experience. Cave art, in this model, is either a record of a shaman's experience of altered states (achieved through meditation or drug use) or a tool to encourage such experiences. (*Science News*, October 5, 1996.)

A DNA test of a small sample taken from the first Neanderthal fossil ever found supports the theory that they were a separate evolutionary branch and not ancestral to modern humans. Critics believe the conclusions were hastily drawn, although the methodology appears sound. (*Dayton Daily News*, July 11, 1997.) ... Neanderthal teeth recovered from a Croatian cave suggest that 90 percent of Neanderthals were right handed, the same proportion as modern humans. (*Science News*, April 19, 1997.)

PALEONTOLOGY

The last Irish elk, *Megaloceros giganteus*, died over 10,000 years ago. Most information about this giant deer is from fossil remains. However soft tissues fossilize poorly, so it was only recognized that the deer had a hump back from Paleolithic art. Clear illustrations of three giant deer in **Cognac Cave**, France, show this hump feature. The unique palmate antlers

Complete Climbing Systems

By Phone

Perfect Gift for Him or Her

Dbi Bungie Rope Walkers \$241

Frog Systems \$165

Mitchell Systems \$290

NSS member Christmas Special

Offer Expires 12-24-97

On Rope: 2nd Edition \$26.00

Call for a free catalog today!

ON ROPE 1, INC.
6313 JAN LANE DR.
HARRISON, TN 37341
423-344-4716

and the quality of the illustration have convinced most to accept the animal as hump backed. (*Natural History*, August 1996.)

BATS

The Center for Disease Control and Prevention (CDC) announced that two deaths in 1996 were from rabies contracted from bats. The deaths were in Kentucky and Montana. Neither victim recalled any contact with bats. The CDC indicated that bats were responsible for half of the 32 rabies-caused human deaths since 1980. (*The Arizona Republic*, May 9, 1997.)

Researchers in South Africa demonstrated that bats can be a reservoir for the deadly Ebola virus. Quarantined bats injected with the virus remained healthy while the virus thrived in their bodies. Only one bat developed antibodies, suggesting that the virus does not evoke an immune response in the bats. The virus was also found in the bat's feces, suggesting a possible transmission route. This does not prove that bats are the virus' reservoir in the wild. A separate study trapped 2,500 mammals (mainly rodents), 36,000 insects, and 500 other animals near Kikwit, Zaire after the 1995 Ebola outbreak there. Laboratory work continues, but all test for Ebola in the animals has been negative. One outbreak in the Sudan was traced to a cotton factory where thousands of bats roosted over work areas. Other outbreaks were traced to **Kitum Cave**, Uganda, which also has bat roosts. (*Science News*, November 9, 1996, *The Arizona Republic*, November 24, 1996.)

A study has placed a value on conserving species and intact ecosystems. One category, illustrated with a photograph of a bat, is animals controlling crop pests. The appended value of this category is \$417 Billion annually. (*U. S. News & World Report*, May 26, 1997.)

In the warmer parts of the United States dead palm fronds are routinely trimmed on developed properties. It turns out that this deprives bats of housing. The southern yellow bat (*Lasiurus ega*) dwells among the fronds, its fur color matching that of dried fronds. Even urban streets with untrimmed fronds house active bat populations, which feed on local insects. (*Bats*, Summer 1997.)

Simmons Rollers
The Complete Line of Chest Rollers
All Models Are Available With Either
Bronze Bushings Or Stainless Steel Ball Bearings



Available From Most Speleo Equipment
Vendors Or Custom Cave Gear
Satisfaction Guaranteed

Custom Cave Gear
P.O. Box 7351
Charlottesville, VA 22906 USA

CONSERVATION

Volunteers have been working to restore **Cherokee Cave**, Tennessee to its pre-vandalism state. The former commercial cave closed in 1980 when a fire destroyed the operation's gift shop and restaurant. Jim Whidby obtained the owner's permission to work on the project and he recruited local cavers. Robert Hamm spent over 3,000 hours in the cave in 1995. Whidby hopes that the cave will not be returned to regular commercial use, but be made available to special groups from schools and churches. Money for the project is raised each October when the cave is converted into a Halloween fright attraction. (*The Knoxville News-Sentinel*, June 21, 1996.)

CAVE RESCUE

Sheryl Valone was rescued from **Clark's Cave**, Virginia, after a thirty-foot fall on Memorial Day. The operation took seven hours to extricate her, using about 100 volunteers. (*The Washington Times*, May 28, 1997.)

CAVE DIVING

Daniel Lenihan began cave diving in the early 1970s. At night he and his friends would don wet suits and become "bargain basement astronauts." He survived this formative period in cave diving, when skills were learned through trial and error "at the cost of many lives." His excursions yielded cave-adapted isopods and crayfish and bones of mastodon and saber-toothed cats. Man's arrival in what is now Florida was more than 11,000 years ago during the last ice age. With more water locked up in glaciers than today, the sea levels were lower. The lower water levels in the caves permitted human entry and the divers found human remains and stone and bone tools. He used to joke with an old cave diving buddy that his book would never be finished in his lifetime. Sheck Exley's book *Caverns Measureless to Man* was in fact published posthumously. (*Natural History*, November 1996.)

The cover story of the summer 1997 *Immersed* takes the reader cave diving in Japan. Cave diving there seems to face cultural as well as physical challenges. Water from the cave called **Ryusen-do** is bottled and sold to tourists. A Japanese diver drown here in the 1960s during the only previous attempt at exploration. The local mayor, concerned that a death would reduce tourist demand for the water, was reluctant to grant approval for a dive. Eventually approval was granted, but the divers were blocked by a human barricade. The cave's caretakers were offended that they had not been approached before the mayor. Eventually an accord was reached and the dive proceeded. At 131 feet a regulator suddenly free-flowed, making the group wonder if there was something to the warning not to dive the cave during the Obon

holiday when the dead diver's soul would be active.

A trip to the **Akka-do** cave included a stop for a blessing by a Buddhist monk, who provided a talisman to each diver. These were tied into their dive helmets. A Japanese diver fell in the dry section of the cave. He landed on his back after a nine-foot fall, perfectly nestled between large rocks. While hurt enough to require evacuation, he was lucky. The others felt that a few inches either way would have produced either upper spinal damage and quadriplegia or internal injuries. Examining his helmet after the fall they found his amulet had snapped in half.



Men's Sizes	Height	Weight
Xsmall	5'-3"-5'7"	115-125
Small	5'4"-5'8"	120-130
Small Medium	5'7"-5'10"	135-145
Medium	5'8"-5'11"	150-165
Medium Tall	5'11"-6'2"	170-185
Medium Large	5'10"-6'1"	170-185
Large Short	5'8"-5'11"	180-195
Large	5'11"-6'3"	185-200
XLarge	6'0"-6'4"	200-215+
XXLarge	6'0"-6'2"	220+

Women's Sizes	Height	Weight
Xsmall (3)	5'0"-5'2"	95-105
Small (5)	5'2"-5'4"	110-115
Medium (7)	5'4"-5'7"	120-130
Large (9)	5'6"-5'9"	130-140
XLarge (11)	5'7"-5'10"	140-155
XXLarge (13)	5'7"-5'10"	155+

BODY GLOVE 3.2mm
wetsuits \$139.00

ADVENTURE
TECHNOLOGIES, INC.
1-800-662-4069

Dives in Akka-do and **Shigawatari Cave** extended the known cave by pushing through sumps. These dives represent the first organized cave dives in Japan. The opportunity for the dives became a reality when a Japanese caver and diver joined the NSS Cave Diving Section.

The same issue of *Immersed* contains an article on organizing expeditions by Rob Palmer. Palmer, who died earlier this year, is famous for his Caribbean cave diving expeditions. He began organizing trips with short vacation cave diving trips to Europe from England. He advises asking what the expedition's goals are, what are the goals of each expedition participant, and exactly what is to be done on site. Research everything and remember that you are an ambassador.

The career of Wes Skiles is highlighted in the September 1, 1996 *Gainesville Sun*. It seems that his inspiration to become an underwater photographer was the old television series *Sea Hunt*. His work has put him in some tough situations, including surviving being trapped in an Australian cave. Emerging from a dive into a dry section of cave, a sudden storm caused the passage to collapse, trapping him and companions for 29 hours. Shooting in the ocean, a great white shark accidentally pried open his shark cage and came inside. Using the camera he shoved the shark out. Skiles is now the producer and director of the PBS series "New Explorers."

The safety lesson in the December 1996 *Skin Diver* is from a new divemaster taking open water students on a 70' deep dive in a cavern. Near zero visibility forced him to guess, fortunately correctly, the way out.

MISCELLANEOUS

The climatic record inferred from isotopes in calcite removed from the **Devil's Hole**, Nevada, was controversial as it contradicted the record developed from marine sediments. New work using a new method, measuring the decay of uranium-235 to protactinium-231, supports the accuracy of the marine record. The marine record strongly agrees with Earth's orbital eccentricities, suggesting that the variation in sunlight intensities are the cause of the periods of glaciation. The new method also suggests the Devil's Hole record is accurate also. This supports the argument that it is a regional record and not a global one as the marine sediments seem to be. (*Science*, May 2, 1997.)

The June 8, 1997 episode of *National Geographic Explorer* included caving in a segment about searching for the El Chupacabra, the goat sucker ... Earthwatch offered participation in 1977 in a number of expeditions involving caves. Researchers in **Mammoth Cave**, Kentucky are working to reconstruct man's use of the cave. A project is underway to assess the tourist "carrying capacity" of **Oregon Caves**, Oregon. Other projects involve archaeological excavations in Australian rock shelters and Spanish caves. (*Earthwatch 1997 Annual Expedition Guide*.)

... A review of the book *Cave Passages* appears in the June 1997 *Geotimes*. The review is generally favorable, likening it to *The Right Stuff* as an insight into cavers. It criticizes author Taylor's fumbling of science, citing his explanation of the spelogenesis of **Jewel Cave** ... Another review of the book appears in the October 6, 1996 *Washington Post*. Also

favorable, the reviewer seems grateful to Taylor for providing insight into a world most will ever see, or want to. He believes the book to be a "refreshing change from usual macho adventure-writer prose a la Tim Cahill." ... The Bosnian government announced that a cave was used as a tomb for more than 250 Muslims believed killed by Serbs during 1992 to 1995. (*Dayton Daily News*, November 12, 1996.) ... An advertisement for *Trailing Louis L'Amour in New Mexico* exhorts "When L'Amour wrote of a cave near a trail it was there! Here's the comprehensive book which helps you find that cave ..." (*Wild West Magazine*, June 1996.)

This month's contributors: Dave Belski, Larry Blair, Barry Chute, Gary Coomer, Tom Crauens, Geotimes, Chuck Green, Bob Hoke, Immersed, Val Klimack, Chuck Porter, Jay Rockwell, John Rutherford, Joel Sneed, Jim Wolff.

Images Below
A MANUAL OF UNDERGROUND AND FLASH PHOTOGRAPHY

Chris Howes

\$40.00 + \$4 S&H

NATIONAL SPELEOLOGICAL SOCIETY, INC. **NSS** 2813 Cave Avenue • Huntsville, AL 35810
205•852•1300 tel • 205•851•9241 fax
nss@caves.org

Inner Mountain outfitters

CAVING, CLIMBING, & RESCUE EQUIPMENT

PHOTON MICRO LIGHT II

- Now with positive on-off switch!
- Super-bright LED: White, Red, Blue, Yellow, or Green!
- Days of light! \$17



STOCKING

LOA **SWISS-TECH**
MICROTECHNICIAN

- Phillips Screwdriver
- Flat Screwdriver
- Precision Pliers
- Wire Cutter
- Shear
- Strong Tempered Steel Alloy
- Jaws Lock to Keyring!



FOLDS TO COMPACT SIZE
\$17

STUFFERS

Princeton Tec



\$32.50

\$25

FROM



LEATHERMAN MICRA
Scissors,
Tweezers,
Screwdrivers, and
more **\$25**

IMO

Calf-High **\$22**

Knee-High **\$29**

Insulated **\$29**



WATERPROOF SOCKS!

Call or write for our 56-page catalog
PHONE OR FAX (540) 377-2690
Rt 1 Box 263 Greenville, VA 24440
imo@caves.org | www.caves.org/~imo

The Office News

by Camille Duke

I just can not believe how fast 1997 has shot by! I finally got used to writing 1997 on checks and was just getting ready to enjoy the summer when I realized that summer was over! Where did it go to? I guess with the SERA Cave Carnival, Convention, and Old Timers Reunion, that time just flew by! Working with David Anderson to get the 1998 catalog out shot what was left of September and now Christmas is almost on us! During all the flurry and hurry of 1997 somehow I never fulfilled one of my 1997 New Year Resolutions. Last December, I'd decided that I needed to start writing an article for the NSS NEWS so that everyone would know who is at the office and what goes on at there. Somehow it never happened! So I have made some early 1998 New Years resolutions! One is to get this article written and the second is to have all my Christmas presents bought and wrapped by December 1st!

First off, let me start by introducing the Office staff and regulars. There are two full time people in the office: Elizabeth Francis and myself. Bill Torode works in the office part time and Jim Hall volunteers quite a bit of his time in the office. That is the entire staff of regulars! What do we do in the office? A bunch! We process memberships (about 1400 a month), book orders, change at least 150 addresses a month, answer membership and grotto inquiries, mail out information packages, pay bills, go to caving events, and the list goes on and on! But who does what?

Beth is the person who answers the phone most of the time. She is always busy helping people place book orders, find a local grotto, change their address, find the nearest commercial cave, and many many other things. In addition to the phones, she processes the majority of membership renewals, reinstatements, and new memberships, plus is in charge of the AV library. It seems that this would keep her busy enough but she seems to find the energy to go to college, mountain bike, and even cave!

Bill Torode works in the office part time. When Beth finishes processing memberships and printing membership cards, Bill takes over the process. He mails people who are renewing their new membership card along with an acknowledgment letter. The new members and old reinstated members also get a copy of the MEMBERS MANUAL, a recent copy of the NSS NEWS, and other assorted goodies along with their welcome letter and membership card. Bill has become a master of the folding and inserting machine along with all the other mailing equipment. He has also learned all the ins and outs of the bulk

mail procedures as he is in charge of the monthly mailings (this is no small feat as they change procedures monthly). In addition to the mailings, Bill pulls and ships all the book orders. Bill keeps very active in the caving community, mapping and exploring caves on the weekends. In addition to all of this, Bill volunteers an enormous amount of time to the NSS Library, Office, and his surrounding neighborhood.

Jim Hall is our volunteer Bookstore Manager but he does so much more for the office. When we have problems with our inside phone lines or computer hardware or need maintenance on our buildings, Jim is the person to call. He can always be counted on to take charge of getting the roof replaced or the parking lot repaired. When we go to caving events, Jim is always there loading and unloading the truck and most importantly setting up the tents! His favorite task was unloading 10,000 copies of ON ROPE in the heat of an Alabama summer! It seems like that would be enough for one volunteer to do but Jim does even more. He helps me decide what new books and items to order in the bookstore, sets bookstore prices, and helps inventory stock quarterly. Like Bill and Beth, Jim keeps active in the caving community plus he finds time to snow ski, dive (he is even cave diving!), and run! It must be nice to be retired!!

I guess that leaves me and then you will know everyone who is in the office on a day-to-day basis. My job title is "Operations Manager" and that seems to cover a lot of ground. I keep up with the day to day operations of the office along with the office accounting. It seems like I am constantly busy running renewals, publications label diskettes, paying bills, working with David Anderson to produce bookstore advertisements and catalogs, ordering bookstore inventory, and the list goes on and on. I have to admit that a large majority of my work would not get done if it were not for the help from volunteers. My last project was the 1998 bookstore catalog (I am proofreading it today). My next huge project is starting parallel testing of our new accounting software. Hopefully we will be completely on the new system by the end of this fiscal year. I hate to say that I am not caving a lot but my time seems to be filled up with gardening, bike riding, volunteering with the American Diabetes Association, and planning for my upcoming wedding. Somehow, I never seem to get a caving trip in

there which is really sad as I live within two miles of at least two nice caves and numerous small 90 to 150-foot pits (sorry, I just had to throw that in for the Tidewater Grotto).

There, I got one of my goals finished! Now to get all those Christmas presents bought and wrapped! I hope that everyone has a great Thanksgiving holiday! Don't eat too much turkey and dressing! Save a little room for the pecan pie!

OFFICE NEEDS COMPUTERS

The NSS office is in dire need of new computers. Our old computers are inadequate for the software programs that we are running. We are hoping that there are a few Santas out there who could help us acquire some new state of the art computers. We need at least 166MHz Pentium, 32MBs of Ram, 3GB Hard Drives, and at least an 8X CD-ROM and it needs to be Novell Certified. We need 3 computers, and could get by without monitors (although we would love just one high performance PCI Video monitor). If you or your company needs a tax deduction, we would love to provide it for you. Please help us keep our budget as low as possible! We hope everyone has a great Thanksgiving!!

Shirts Petzl Harnesses Tents

**GUADALUPE
MOUNTAIN
OUTFITTERS**

"TOOLS FOR EXPLORATION"

**PO BOX 2429 / 216 S CANAL
CARLSBAD, NM 88220**

**(505) 885-9492
PHONE & FAX**



<http://www.carlsbadnm.com/gmo>
gmo@carlsbadnm.com

Call or e-mail for free catalog

PMI Gloves Lights Tents

**Change of address?
Missing issues?**
Please contact the NSS office,
not the NEWS editor.

GROTTO HONORED BY ACCA

Last May, The American Cave Conservation Association presented the Cleveland Grotto with a plaque as a symbol of their appreciation for our continued support, both financially and especially physically. We believe the ACCA is one of the most important cave conservation tools in the world because it reaches out and educates thousands of the non-caving public, teaching them not only the history of caving and cave conservation but how they can be a factor in cave and karst health. For the most part, the caving community has a good conservation ethic. But without educating the general public about how caves are intertwined with their world, cavers' conservation efforts would be a never ending upstream struggle. With the help of the noncaving public greater strides are taking place.

Frank Vlchek

Cleveland Grotto Conservation Chairman

NSS PERSONAL PROPERTY COMMITTEE NEEDS CHAIRMAN

The committee is responsible for maintaining a database listing all NSS personal property. This is used to track assets and determine depreciation for NSS fiscal reports. If you are interested in chairing this committee contact the NSS Treasurer, Paul Stevens, at "PLSTEVENS@AOL.COM" or write him at 5964 Seabright Road, Springfield VA 22152.

NEW VIDEO PROGRAMS

The following new video programs, from this year's Video Salon, are available now for check-out from your NSS Audio-Visual Library. Contact the NSS Office at <nss@caves.org> or (205) 852-1300 for procedures and a full program listing. Thanks to all the producers for these fine additions to the Library! Videographers, now is the time to start polishing up that new production for entry in the 1998 Video Salon.

Alex Sproul

NSS Video Committee

SPIRIT OF EXPLORATION

Stunning videography by Tom Zannes highlights this tour of **Carlsbad Caverns** National Park, including off-trail portions of Carlsbad, **Slaughter Canyon Cave**, **Spider Cave**, and of course, **Lechuguilla**. ©CCGMA, 1993. **V629** (58:00)

CAVES OF THUNDER

The caves, land, and people of Irian Jaya, New Guinea, are featured in this spectacular 6-projector slide show by Gavin Newman (UK), with an original sound track by Rob Gould. ©Gavin Newman, 1993.

V632 (18:15)

CRYSTAL BEACH SPRING PROJECT '96

Cave divers explore a freshwater cave system that exits from beneath the ocean floor off Crystal Beach, FL. Good visuals of dive

technique and cave biota. ©Hydro-Geo Env. Research, 1997.

V751 (19:37)

UNDERGROUND SYMPHONY

This whimsical piece demonstrates the magic that digital editing and animation have brought to amateur video. Cave formations come to life, playing classical accompaniment to dancing hodags and gremlins. ©Fred Baumann, 1997.

V752 (10:06)

Also on this tape...

SP CAVE

Forest Service efforts to protect and preserve this spectacular Arizona cave are the focus of this documentary. Unique monitoring and restoration techniques are highlighted. ©Fred Baumann, 1997.

V752 (18:03)

DEATH CANYON II

Cavers' attempts to penetrate "Death Canyon" and the second siphon in **Culverson Creek Cave, WV**, are documented. Unlike the original video, which was fictional, this sequel follows real-life attempts to extend this already large cave system. Medal winner in NSS Salon. ©Hodag Video, 1997.

V753 (33:35)

CAVING SAN ANTONIO

This segment of the "Scouting Challenge" series, broadcast on the Outdoor Life Channel, follows caver Bill Steele and a group of Explorer Scouts into **Robber Baron Cave**, beneath the streets of San Antonio, TX. ©BSA, 1997.

V754/23:55/P/P

INTERNATIONAL NEWS

DIVING IN THE DESERT

The July/August, 1997 issue of the magazine *Aramco World* contains a lavishly illustrated, seven-page article called *Diving in the Desert*. Author Erik Bjurström describes the realization of one of his long-nurtured fantasies: finding and exploring a complex underwater cave system deep beneath the harsh desert of central Saudi Arabia.

I met Bjurström in 1994 and introduced him to several dry caves alongside the Dahna Desert. That weekend trip apparently convinced him that finding water-filled caves was also feasible, if you only looked in the right place. That place turned out to be Kharj, a town only 60 miles southeast of Riyadh, famous for its waterholes. Bjurström found two likely looking deep pits but disregarded them due to his unfamiliarity with vertical caving techniques. Then he heard about the death of a scuba diver in a well-known underground lake called Ain Hit, connected to the surface by a steep, but climbable passage. Here he may have been the first person to explore the lake with breathing equipment: "I had never seen such clear water," he reports. "That clarity and the utter stillness of its surface, made it hard to see

where the water actually began." Bjurström also learned - by trial and error - a great deal about the dangers that distinguish cave diving from what he was used to. He had to deal, for example, with "a silt of anhydrite, as fine as flour. When stirred by the gentle currents we created, it made the water as white and opaque as milk." Fortunately, Bjurström soon teamed up with Mike Gibson, an NSS cave diver who had brought along with him plenty of sophisticated cave diving gear as well as years of experience. Together with diver Arlene Foss, they explored three large chambers with a narrow passage leading onwards.

On one occasion, Bjurström was swimming beneath 30 meters of water when he suddenly heard a rumbling noise that "sounded like falling rocks." Expecting to be trapped in a collapse, he looked up and saw that his accumulated air bubbles had begun to migrate upward along the smooth, gently inclined ceiling above him, creating the ominous reverberations.

The divers found almost no formations in Ain Hit, but they did come across a tiny,

transparent, shrimp-like amphipod, which so far has eluded identification.

Bjurström's photographs are truly impressive, many demonstrating his skill at using a fisheye lens creatively. His descriptions and reflections are gripping and take us along during his evolution from daylight diver to cave diver. His statements on the dry caves he visited, however, are a bit richer in imagination than research. He might have checked past issues of *The Desert Rambler*, published by the Riyadh Natural History Society for the facts on Dahl Sultan's history (and why it is named "Sultan").

Kudos to Bjurström and his team who can dive only once at each visit, because of the silt. We can expect more articles on Ain Hit as the explorations continue and eventually a map, because, as Erik Bjurström put it, "To climb down to the water and hours later, back up again, carrying a full load of diving gear, in temperatures that sometimes reach 113 degrees F, is a real test of our endurance and enthusiasm, but both have yet to flag."

John Pint

NEWS AND NOTES

ORGAN CAVE AUCTION

On September 20, the commercial entrance to West Virginia's Organ Cave was auctioned. Organ is the second largest cave in the state, with over 60 km of passage surveyed. A consortium of area cavers was prepared to bid up to \$210K for the cave, but the cave entrance was unexpectedly combined with two parcels and sold at \$253K.

The cave was purchased by Lewis Wilson, Sam Morgan, and possibly a third person. They are local area residents who are familiar with the cave. Someone at the auction said that they plan to reopen the cave for commercial operation, and that they will

probably be friendly to cavers. However, it is very premature to speculate on what type of access will be granted to cavers, or what changes may be made to the cave. Some folks on the auction company staff said they were very surprised by the outcome, and that they really expected us to be the only serious bidder for the cave.

Postscript: This outcome was NOT what I expected at all. I think we (the caving community) made a serious attempt to preserve this cave, but it was not to be. Perhaps the cave will go up for sale sometime in the future and we can try again. The rumors that the State was interested in purchasing the

cave apparently were false and seemed to have no impact on the auction at all.

And to the almost 100 cavers and organizations who made pledges: THANKS! The fact that we were able to raise \$188K in three weeks is pretty incredible and says a lot about the caving community's commitment to cave protection. Needless to say, we will not need any pledge money since we did not have any significant expenses in getting things together. Again, THANK YOU FOR YOUR PLEDGES AND YOUR SUPPORT!!

Bob Hoke

ed. note: this is an abbreviated version of Bob's report on Caver's Digest

READING

GUIDELINES FOR CAVE AND KARST PROTECTION

John Watson, Elery Hamilton-Smith, David Gillieson, and Kevin Kiernan, eds. International Union for Conservation of Nature and Natural Resources, Cambridge, UK, and Gland, Switzerland; 1997. 16 x 24 cm, x + 53 pp, softbound. ISBN 2-8317-0388-3. 815 or R10 from IUCN Publications, 219c Huntingdon Road, Cambridge CB3 0DL, United Kingdom; add 20 percent for surface mail, twice that for airmail. Americans may use personal checks or Visa, MC, or Amex cards.

This booklet was prepared for the IUCN World Commission on Protected Areas by their Working Group on Cave and Karst Protection. It contains an elementary introduction to the nature of karst regions and a series of thirty-one recommendations. To someone with any familiarity with the concepts of karst-area management, the recommendations will seem both obvious and vague, but the book is really aimed at

planners who have no special knowledge of karst. The emphasis is on maintaining the integrity of the entire karst system and its drainage and ecosystem, rather than on the nitty-gritty of preserving things like speleothems or individual endangered species, but it does contain a brief version of an Australian minimum-impact caving code. It is realistic, and emphasizes that local customs and economic needs also need to be considered. An appendix lists the members of the working group, and another lists a number of web sites with useful information on caves and karst.

Bill Mixon

CAVES

by Patricia Armentrout, Rourke Press, Florida, 1996. 7.75 x 10.25 inches, 24 pp, 14 color photographs, hardbound. ISBN 1-57103-152-9. \$12.95 postpaid from Rourke

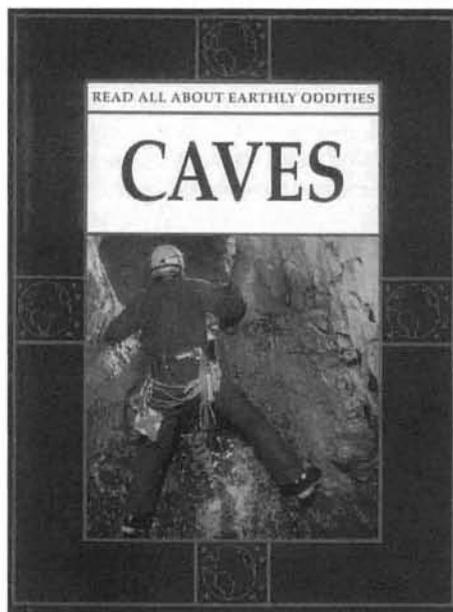
Press, Inc., P.O. Box 3328, Vero Beach, FL 32964. They typically sell the books only to schools and libraries.

This children's book is part of a series called "Read All About Earthly Oddities" which includes books on waves and tides, hot springs, and lightning. It's an educational book intended for elementary school libraries. It begins with a definition of a cave, talks about how caves are formed, and goes no further than a discussion of stalactites and stalagmites when it comes to speleothems. Cave biology is a major emphasis, with sections on The Entrance Zone, The Twilight Zone, and The Dark Zone. The text is minimal and the explanations simple, as befits a book for children, but the information is accurate and strong safety and conservation statements are included. The book's strong point is its well-printed color photos, many of them printed full-page, ranging from shots in Lechuguilla and other western caves to Borneon cave racers, bats, and crickets.

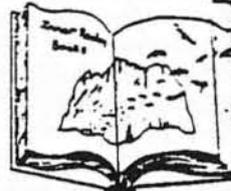
Dave Bunnell



SPELEOBOOKS
YOUR SPECIALIST
IN
CAVE & BAT
BOOKS, PRINTS & EPHEMERA
NEW, USED & ANTIQUARIAN
ONLINE CATALOG: www.albany.net/~oldbat
EMILY DAVIS MOBLEY SCHOHARIE, NY 12157
P.O. Box 10 518/295-7978; FAX 518/295-7981
e-mail oldbat@albany.net CATALOGS ISSUED



Inner Realm Books



Free Catalog Featuring
Books For Cavers.
Request Your Copy Today!
RICH WOLFERT (303) 278-1891
P.O. Box 622, Golden, CO 80402

Exploration: In the November 1947 Newsletter Clay Perry and LeRoy Foote reported that "The largest expedition of cave crawlers ever to assemble in the Northeast, met in the Helderberg Mtns., west of Albany, N.Y., October 11-12, exploring eight caves there and in Schoharie Co. Fifty persons in 18 cars ... hastened from one cave to another, finally winding up within (sic) a real cave-man's trip through Benson's Cave, near Howe Cave Village. To gain entrance ... (they) negotiated a sheer drop of 60 ft. using a rope ladder. Some of the party waded to their knees, others crawled in water to see the 900 ft. chamber at the bottom ... and still others sweated in a vain attempt to dig out a rock fall ... Other caves visited ... were Bear's Den, Tory Thacher Park, Secret Caverns (Commercial), Farmer Brown's and Old Maid's Hole"

"Before March 6, 1955, Wayne Cave was just an ordinary, run of the mill, Indiana cave." Then Bill Auckerman and Jerry Clark pushed "420 yards of ... crawlway to find it opening into a system of large passages which seemed ... to go on indefinitely. ... The main course of the cave winds its way in a generally westward direction ... This passage is quite large and ... is negotiated by bolder-hopping or climbing over gigantic piles of breakdown. ... The Stalactite Room, ... exhibits a most beautiful array of speleothems ... and leads off into another passage ... via Helictite Corner A total of 1550 yards of this cave were mapped. The estimated length of unmapped, but explored, passages is put at 1800 yards." Bill's article in the November 1957 issue of *The NEWS* was accompanied by Don Martin's photographs.

"Lane Cave was first recorded ... by Bill Mauck and ... (John Holsinger) in August 1961. About 800 feet of large stream passage ... (ended in) an intriguing upstream "siphon". ... Sometime in 1964 or 1965 some local cavers penetrated the siphon and discovered what they called "the formation passage" beyond. ... (later they) took ... three "bone hunters" on a tour of the upstream section. About 200 feet beyond the siphon (Sam) Taylor discovered a huge bone projecting from a clay bank ... and soon removed a large number of bones, ... (later identified) as belonging to *Megalonyx jeffersonii* a species (of giant ground sloth) extinct since the late Pleistocene" In the November 1967 *NSS NEWS*, John reported that "The bone discovery re-kindled my interest in Lane Cave and ... David Irving, Sam Taylor and myself returned to ... survey the upstream passage. There is about 900 feet of passage beyond the siphon and about one-half of it is superbly decorated with massive white draperies and shield formations."

"In Fentress County, Tennessee, the East Fork of the Obey River has carved a deep gorge into the western escarpment of the Cumberland Plateau. For seven miles the river winds through a forest-cloaked limestone canyon almost 1,000 feet deep." In the November 1977 *NSS NEWS* Bill Dean explained how early investigations of this area were hampered by long hikes, heat and humidity. The initial exploration of Zarathustra's Cave yielded 2600 feet of trunk passage, averaging 50 by 30 feet in cross section, but not the master drainage system that was expected. Then a new logging road enabled Bill, Jay Arnold and Martha McGlasson to drive to the very bottom of the gorge. Arriving refreshed, Jay soon found a chimney leading to virgin walking passage which ended abruptly in a flowstone choke. But the disappointment was only temporary. "Martha found a crawlway so small we doubted that even she could fit. ... and after 15 feet we stood up on the far side of the flowstone choke. .. We worked our way through short segments of walking passage connected by stoopways and brief crawls." The trip continued with discovery upon discovery, until "it became obvious that fatigue was setting in. We had explored 7900 feet of virgin cave. It was time to go home."

The November 1987 *NSS NEWS* featured Nicholas Crawford & Christopher Groves' *Recent Cave Exploration Beneath Bowling Green*. "In 1984, the U.S. Center for Disease Control (CDC) issued a health advisory for the Bowling Green area in response to small concentrations of potentially toxic and explosive fumes rising from the aquifer beneath the city ... and the U.S. Environmental Protection agency initiated a "Superfund" emergency response ... As a result of these activities, cave surveyors for the Center (for Cave and Karst Studies) had unprecedented resources with which to dig open and explore caves. Although the city's cave systems have areas sadly affected by pollution problems, ... (to date) over 19 kilometers have been explored ... and they have yielded several kilometers of virgin finds." The article provided detailed information on Lost River, Robinson, and Sullivan Caves.

International: The November 1947 Newsletter reported that "Members can obtain a number of British caving books and pamphlets from our British agent, Mr. Gerald Platten. One published this year, *The Caves of Mendip*" is a group of three, - *The Great Cave of Wooky Hole*", where bones of many prehistoric animals are found, *Cheddar, its Gorges and Caves*", and *Swallet Caves and Rock Shelters*". All three can be had for \$4.50."

The November 1957 issue of *The NEWS* reported that Don Peters, Al Anuta, Bill Auckerman and Hakon Burger had gone looking for the "legendary Boca del Diablo — the Devils Throat — near Taxco, Mexico. Bandits ... reputedly used this "bottomless pit of terror" to dispose of their victims. ... Enormous thicknesses of limestone existed ... Winch and cable seemed indispensable, yet were expensive ... (so) this expedition ... served to test a new technique in deep cave rigging — prussicking on a fixed rope ... with a combination chest and tractor seat assembly ... (using) a new 1200 foot coil of 5/8 inch manilla rope." A report on this expedition, and a cross section of the 300 plus foot pit they plumbed, appeared in *The NEWS*.

The November, 1967 *NSS NEWS* cited a report from *The Times of London* that six British Cavers had drowned in Mossdale Caverns. "One of the explorers, who parted from the expedition and returned to the surface said that his colleagues were expecting rain when they went in. A freak thunderstorm flooded the cave."

In *Book Review Notes* in the November 1977 *NSS NEWS*, Barry Beck reported on a number of publications he had found at the 7th International Congress. "The Hungarians put out a special issue of their *Karst es Barlang* (Karst and Caves) ... It is in English ... and contains summary articles on karst types, caves, water use, cave climate, cave fauna and flora, archaeology, and exploration and rescue ... The Hungarians do not wish to sell this, but would like to exchange. ... There is an interesting English b&w cave picture book ... *British Caves and Potholes* by P.R. Deakin and D.W. Gill. ... (and the) profusely illustrated ... *A Pictorial History of Swildon's Hole*, by P. Davies. ... However, if you are a picture book collector, the *pièce de résistance* is Alfred Bögli's new book *Zauber der Hölen*. Forget the fact that it is in German. If a picture is worth a thousand words, then you can read this book in any language. "

According to Jay Arnold, in *International NEWS*, in the November 1987 *NSS NEWS*, "South African Speleological Society members are claiming discovery of the world's largest underground lake in Dragon Breath's Cave near Grootfontein, Namibia ... According to ... Stephen Craven, the new cave contains a lake of more than two hectares surface area (about five acres). ... divers ... were unable to follow an underwater tunnel for more than a hundred meters or so because of extreme depth ... Apparently the lake level fluctuates greatly, even as much as 30 m or more ... The lake's discovery already has set off a controversy. Namibian officials are eying the lake as a potential source of potable water for the arid country."

The Ranshaws of Covington, Kentucky and Mammoth Cave....

(continued from page 347)

Dorothy Ranshaw died March 7, 1997 and is buried along with Willis, Alvin, Dollie, and John Thorpe Ranshaw, at Highland Cemetery in Fort Mitchell, Kentucky. I will always remember Dorothy's final words to me when I completed my interview in 1996. She turned and said, "Thank you for taking me back to Mammoth Cave!" Thank you, Dorothy. Rest well.

Special Thanks To:

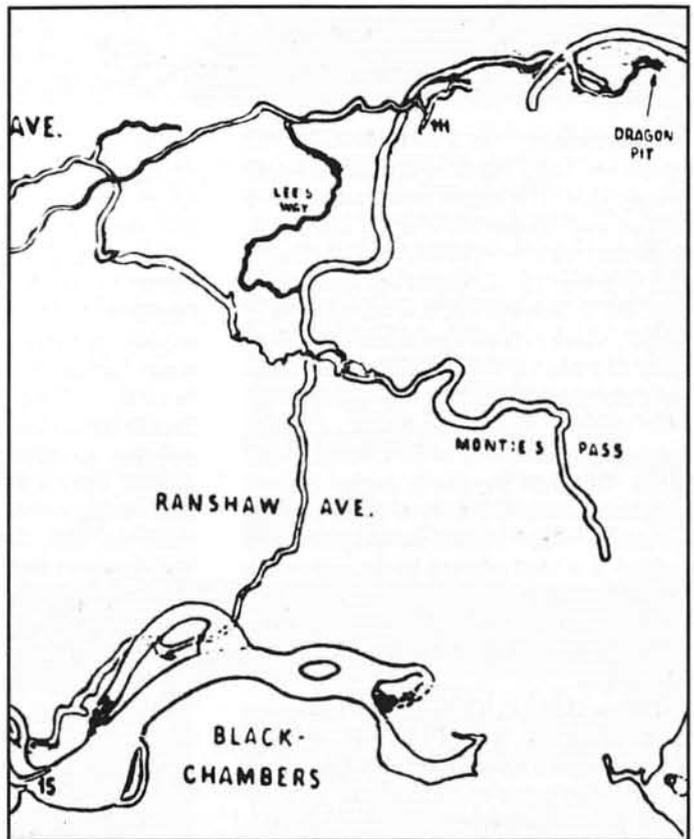
Cave Research Foundation (CRF)
Dorris Browning, Covington, Kentucky
Bernhard Kliebhan, Hessicher Rundfunk, Frankfurt, Germany
Joy Medley Lyons, Chief Program Services, Mammoth Cave National Park

Wayne Onkst, Kenton County Library, Covington, Kentucky
Dorothy Louise Ranshaw and the Ranshaw family, Covington, Kentucky

Tres Seymour, Publications Specialist, Mammoth Cave National Park

Mary A. Terrell, Highland Cemetery, Fort Mitchell, Kentucky

Charles J. DeCroix is a Park Ranger/Cave Guide at Mammoth Cave National Park. Funding for the project, "Max Kämper and the Mammoth Cave Connection" was made possible through a research grant by the National Speleological Society.



CLASSIFIED ADS

WANTED: Old electric trains, toy trains. Any age, any condition. Will trade caving gear or cash. Bob Liebman, P.O. Box 441, Lewisburg, WV 24901 (304)772-5049. 1

FLUORESCENT CAP LAMPS available now. Three models or custom built. For free brochure contact Nevin Davis, HCR03, Box 99, Burnsville, VA 24487, (540) 925-2322, www.concentric.net/~Nevtek/lamp.shtml 11

Buying or Selling **REAL ESTATE** with caves? Call the "Cave Connection", Bev Sweet, Realtor. Coldwell Banker Heritage, PLL. (800) 233-8477 12

VERTICAL TRAINING PROGRAM for Grottos. Developed and endorsed by the Vertical Section. Complete package for instructors is \$20.00. Includes 5 Instructor manuals and class forms. Student package (manual and forms) is \$1.50. Shipping included with orders over \$10. Call (904) 268-7638 or gbush@jaxnet.com for details. 5

DIET, Lose up to 30 lbs. 30 DAY Programs start at \$30 **MAGIC**, 940-564-5097. 11

LET YOUR BODY DO THE TALKING! LOOK GOOD, FEEL GREAT! AWESOME ENERGY! BE NOTICED! HOW? Call for friendly advice (940) 564-5971 11

I HEED HELP! WORK AT HOME, PART OR FULL TIME, \$15-\$35 per hour. Cash Earned Daily, Good Attitude A Must. A better future is up to **YOU.** 940-564-5097. No door to door, cold calling or telemarketing. 11

UNIQUE GIFT - Piece of telephone wire used during NSS C-3 Expedition in Floyd Collins Crystal Cave. (Framed) Item auctioned for \$67.00 at Blacksburg, VA Convention. Limited quantities available for \$55.00, which includes shipping in continental US. Proceeds to help fund cave project. Checks to Bill Thoman, 4905 Ralph Ave., Cincinnati, OH 45238. More info? Contact Speleo@Juno.com 11

CAVING VIDEO. "Huatla: The Mexican Cave." World-class caving, American style. Big water. Big pits. High-tech diving. Ancient human artifacts. Blue ribbon winner 1996 NSS Video Salon. \$20 postpaid. Checks, MOs to: Jay Arnold, 10031 Downey's Wood Ct., Burke, VA 22015-2731. 12

ENDANGERED BATS FOR SALE- The Southeastern Cave Conservancy has bought Georgia's Fricks Cave and 10,000 endangered Gray Bats. We desperately need your help to pay off the huge mortgage and save the bats. Each \$10 Tax-deductible contribution gets you honorary ownership of one *Myotis grisescens*, commonly known as the Gray Bat. They're cute, furry, and endangered! Comes with SCC bat decal and certificate of honorary ownership. Check, Visa, MC accepted. SCC Fricks Fund, 40 Hidden Brook Ln, Signal Mtn TN 37377-2063. (770) 822-0003 e-mail info@scci.org or see our web site at www.scci.org.

WANTED: Spanish-speaking companion for non-caving Mexico trip. Bus travel. May 20-June 20. Bobbi Nagy, P.O. Box 999, Franklin, WV 26807 11

PHOTOGRAPHERS! Why pay Pelican prices? Waterproof, indestructible ABS camera case is perfect for SLR, strobes, and accessories. Inside 7 1/4x9Wx6D. \$25 postpaid, while they last. IMO, (540) 377-2690. INNER MOUNTAIN OUTFITTERS, imo@caves.org Phone/Fax (540) 377-2690 CAVING, CLIMBING, AND RESCUE EQUIPMENT Route 1 Box 263, Greenville VA 24440-9727 1/98

\$1,000 REWARD for information leading to purchase of cave, surrounding land, in remote OK-AR-MO area. Phone (703) 757-7132; fax (202) 244-3112 1/98

1995 Speleo Digest has over 600 pages of articles, maps, graphics, 'toons, poetry, and humor and a rock bottom price of only \$19.95 (plus \$3 shipping). Only about 100 remain in stock! Order one today before they are completely sold out. Contact NSS Bookstore, 2813 Cave Ave, Huntsville, AL 35810, (205) 851-9241 or nss@caves.org. 12

RATES: 35 cents per word, with a 10% discount for ads running three months or longer. The following count as one word each: P.O. Box #, street address, city, state, phone #, zip code, email address, web address. Payment must accompany copy. Make checks payable to the National Speleological Society and send along with ad copy to: NSS NEWS, 320 Brook Drive, Boulder Creek, CA 95006.



(800) 262-2283
 (304) 772-5049
 (304) 772-3076 FAX

CHRISTMAS SPECIALS

(prices good until Jan. 10, 1998)

1. Rope Special—300 feet of PMI classic pit rope 132.00
2. Petzl Mega Light, Petzl Ecrin-Roc Helmet, three C batteries 110.00
3. Calendar Special—Speleo Projects, Caves, and Bats Calenders 30.00
4. Stocking stuffer—12 cyalumes, Bob&Bob thermometer, key chain, mini-mag with batteries, bat stickers 35.00
5. Video Special—Lechuguilla, Caverns of Sonora, Huautla 64.00
6. Survey Special—Silva Compass, Clinometer, five survey notebooks 175.00

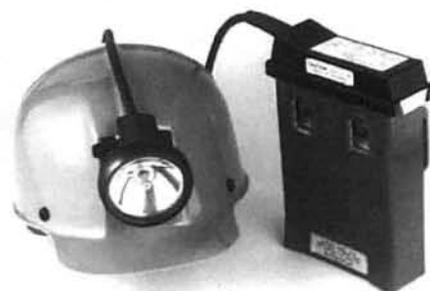
CALENDARS

NEW! 1998 Calendars—shipping 1 or more 4.00
 Speleo-Projects calendar 12.95
 Caves Calendar (by the Bosteds) 10.95
 Bats Calender 10.95

Wheat Lamp with charger (see photo to right; helmet not included) 225.00
 Spare parts and spare batteries available.

NEW T.A.G. LIGHTS

NEW: TAG LITE II
 Made by Hard Core Industries for cavers. New model has headpiece with two reflectors. Two models:
 with sealed lead-gel battery. 120.00
 with battery pack for back of head for four batteries 75.00



GREAT BOOKS

- On Station* by George Dasher 18.00
On Rope by Bruce Smith and Allen Padgett (Revised Edition) 30.00
Underground Worlds 15.00
Caving Basics, 3rd Edition 11.00
The Wildemess Underground—Caves of the Ozark Plateau 28.00
The Miner's Flame Light Book by Henry A. Pohn hb 85.00
Adventure of Caving by Dave McClurg 19.95

Cyalume Light Sticks
 12-Hour green, red, blue 1.75 ea

HELMETS

Cave Master Helmet

Cave Master Helmet: Heavy duty, 4-point suspension, air holes for circulation, adjustable chin strap, meets UIAA standards.

Comes w/bracket, S,M,L...61.95
 Without bracket, S,M,L...59.95



Petzl Rock Ecrin Helmet

\$73.80



VIDEOS

- Caverns of Sonora* 24.95
Huautla: The Mexican Cave 20.00
Spirit of Exploration 19.95
Bats of America 27.95
Bats: Myth and Reality 27.95

New Videos - Inquire Add \$3.50 Shipping



Prices subject to change without notice.



VERTICAL EQUIPMENT

- Petzl Croll 39.00
 Petzl Jammer 40.00
 Petzl Expedition (left or right) 48.00
 Gibbs-Spring Loaded or Free Running 40.00
 CMI large Ultra Ascenders 105.00/pr.
 SMC rack with 6 bars 53.00
 BW rack with 6 bars 41.00
 Presewn rope-walking systems by Karst Works (Contact us for more information)
 Simmons Roller sewn into chest harness 93.00
 Simmons Roller (only) 39.50
 Double Rollers available
 1" Tubular Webbing 30/ft.
 Bob & Bob Locking - D 8.00
 SMC Locking - D 11.25
 Triangular Screw Link 5.50
 Jumars 105.75/pair

LIGHTING

- Petzl Mega Light 52.00
 Petzl Zoom Light 36.50
 Battery for Zoom Light 5.95
 B&B Light Model - 4 AA 22.50
 Petzl Duo 38.40
 Mini-Mag 12.95
 Super Sabrelite 32.40
 Set Helmet Clips 2.75

Patches—Need grotto patches?
 Call for pricing.

GIFT CERTIFICATES AVAILABLE

NEW BOOKS

- Caverns Measureless to Man* by Sheck Exley sb 21.50
Images Below by Chris Howes 40.00
Cave Minerals of the World by Carol Hill & Paoli Forti 65.00
Caves of Gunung Buda 15.00
The Art of Caving by Linda Heslop 10.00
 Shipping for 1 or more books 4.00

GIFT IDEAS

- Leatherman tool 45.00
 Super Leatherman 60.00
 Gerber tool 60.00
 Carabiner key chain 4.95
 Mini-mag 12.95
 Bob & Bob thermometer 3.00
 Leatherman micra 26.00



LOST CREEK PACKS

- #1 TAG 51.00
 #3 Caver's Special 48.50
 Rope Bags Inquire
 Rope Pads - 5 ft 11.00

See Catalog for complete list of packs

KNEE PADS

- Athletic Knee Pads 6.00/pair
 Rockmaster Knee Pads 24.50/pair

GLOVES

- Leather Palm & Canvas Back 2.95/pair
 Men's & Women's sizes

SURVEY EQUIPMENT

- Silva Compass 85.00
 Silva Clinometer 95.00
 Bob & Bob Survey Notebook - 24page ... 2.95/ea
 Survey Tapes Inquire

The Atlas & Gazetteer Series by DeLorme—each book is a set of topo maps for a state. New books include: West Virginia, Arkansas, Kentucky, South Dakota, Kansas. 32 states available.
 Most books.....16.95

BOB & BOB, P. O. Box 441-N, Lewisburg, WV 24901, (304) 772-5049, 772-3074 or FAX 772-3076



DESERT CAVES OF SAUDI ARABIA

